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Acronis True Image Home 2010

User's Guide

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Table of Contents

1. Introduction 9

1.1. What is Acronis® True Image Home? 9

1.2. Acronis True Image Home basic concepts 10

1.3. New in Acronis True Image Home 2010 12

1.4. System requirements and supported media 13

1.4.1. Minimum system requirements 13

1.4.2. Supported operating systems 13

1.4.3. Supported file systems 14

1.4.4. Supported storage media 14

1.5. Customer technical support 15

2. Acronis True Image Home installation and startup 16

2.1. Installing Acronis True Image Home 16

2.2. Extracting Acronis True Image Home 16

2.3. Running Acronis True Image Home 17

2.4. Upgrading Acronis True Image Home 17

2.5. Removing Acronis True Image Home 17

3. General information and proprietary Acronis technologies 19

3.1. The difference between file archives and disk/partition images 19

3.2. Full, incremental and differential backups 19

3.3. Backup file naming conventions 20

3.4. Acronis Secure Zone™ 21

3.5. Acronis Startup Recovery Manager 23

3.5.1. How it works 23

3.5.2. How to use 23

3.6. Viewing disk and partition information 23

3.7. What is Try&Decide™? 24

3.8. Acronis DriveCleanser, File Shredder, and System Clean-up 24

3.9. Support for Zip format 24

3.10. Acronis Nonstop Backup 25

3.11. Booting from system image tib files 25

3.12. Acronis Universal Restore 25

3.12.1. Purpose of Acronis Universal Restore 25

3.12.2. General principles of Acronis Universal Restore 26

4. Preparing for disaster recovery 27

4.1. How to prepare for disaster as best as you can 27

4.1.1. Recommendations for testing that your backups can be used for recovery 27

4.1.2. Additional recommendations 28

4.2. Testing bootable rescue media 28

4.3. Creating a custom rescue CD 31

5. Getting to know Acronis True Image Home 32
5.1. Program workspace 32
5.2. Acronis One-click Backup 33
5.3. Main screens 35
5.4. Options screen 37
6. Creating backup archives 39
6.1. Preparing for your first backup 39
6.2. Deciding what data to back up 39
6.3. Some typical backup scenarios 40
6.3.1. Backing up a system partition 40
6.3.2. Backing up an entire system disk 42
6.3.3. Backing up a data partition or disk 43
6.3.4. Backing up files/folders 44
6.3.5. Backing up to a network share 45
7. Acronis Nonstop Backup 47
7.1. What is Acronis Nonstop Backup 47
7.2. Enabling and setting up Acronis Nonstop Backup 47
7.3. Using Acronis Nonstop Backup 49
7.4. Recovering partitions protected with Acronis Nonstop Backup 50
7.5. Recovering files protected with Acronis Nonstop Backup 51
7.6. Managing Acronis Nonstop Backup storage 53
8. Online backup 54
8.1. Creating an Online backup account 54
8.2. Recommendations on selecting data for storing online 55
8.3. Backing up to Acronis Online Storage 55
8.4. Recovering data from Online Storage 57
8.5. Managing Online Storage 59
8.6. Setting online backup options 60
8.6.1. Connection attempts 60
8.6.2. Storage connection speed 61
8.6.3. Storage cleanup 61
8.6.4. Proxy settings 62
9. Additional backup features 63
9.1. Making reserve copies of your backups 63
9.2. Archive to various places 65
9.3. Backup Wizard – detailed information 68
9.3.1. Selecting what data to back up 68
9.3.2. Selecting archive location 70
9.3.3. Scheduling 72
9.3.4. Backup method 72
9.3.5. Selecting what to exclude 74
9.3.6. Selecting the backup options 75
9.3.7. Setting automatic consolidation 75
9.3.8. Providing a comment 76

9.3.9. The backup process ... 77
9.4. Fine-tuning your backups ... 77
9.4.1. Backup options ... 77
9.4.2. Local storage settings ... 81
9.4.3. Creating a custom data category for backups ... 84
10. Data recovery with Acronis True Image Home ... 85
10.1. Recovering your system partition ... 85
10.2. Recovering a disk backup to a different capacity hard disk ... 86
10.2.1. Recovering a disk without a hidden partition ... 87
10.2.2. Recovering a disk with a hidden partition ... 88
10.3. Recovering a data partition or disk ... 90
10.4. Recovering files and folders ... 91
10.4.1. Recovering files and folders from file archives ... 91
10.4.2. Recovering files and folders from image archives ... 92
11. Additional recovery information ... 95
11.1. Recovery Wizard - detailed information ... 95
11.1.1. Starting the Recovery Wizard ... 95
11.1.2. Archive selection ... 95
11.1.3. Recovery method selection ... 96
11.1.4. Selecting a disk/partition to recover ... 97
11.1.5. Selecting a target disk/partition ... 98
11.1.6. Changing the recovered partition type ... 99
11.1.7. Changing the recovered partition size and location ... 99
11.1.8. Assigning a letter to the recovered partition ... 100
11.1.9. Setting recovery options ... 100
11.1.10. Executing recovery ... 100
11.2. Setting default recovery options ... 101
11.2.1. File recovery options ... 101
11.2.2. Overwrite file options ... 101
11.2.3. Pre/post commands ... 102
11.2.4. Recovery priority ... 102
11.3. Detailed information on recovery operations involving dynamic/GPT disks and volumes 102
11.4. Using Acronis Universal Restore ... 103
12. Try&Decide ... 105
12.1. Using Try&Decide ... 108
12.1.1. Try&Decide options and notifications ... 108
12.2. Try&Decide usage examples ... 109
13. Scheduling tasks ... 111
13.1. Creating scheduled tasks ... 111
13.1.1. Setting up once only execution ... 112
13.1.2. Setting up upon event execution ... 112
13.1.3. Setting up periodical execution ... 113
13.1.4. Setting up daily execution ... 114
13.1.5. Setting up weekly execution ... 115
13.1.6. Setting up monthly execution ... 115
13.2. Importing scheduled tasks when upgrading ... 116
13.3. Managing scheduled tasks ... 116

13.4. Examples of backup scheduling scenarios ... 117
13.4.1. Full backups with automatic deletion on quota violation ... 117
13.4.2. Full backups with automatic deletion when backup storage is filled ... 118
13.4.3. Full backups to Acronis Secure Zone with automatic deletion ... 118
13.4.4. Full + incremental/differential backups with automatic rotation ... 119
14. Managing Acronis Secure Zone ... 121
14.1. Creating Acronis Secure Zone ... 121
14.2. Resizing Acronis Secure Zone ... 124
14.3. Changing password for Acronis Secure Zone ... 124
14.4. Deleting Acronis Secure Zone ... 125
15. Creating bootable media ... 126
15.1. Creating Linux-based rescue media ... 126
15.2. Creating BartPE disc with Acronis True Image Home ... 128
15.3. Creating WinPE-based rescue media ... 130
15.3.1. Adding the Acronis Plug-in to WinPE 1.x ... 131
15.3.2. Adding the Acronis Plug-in to WinPE 2.x or 3.0 ... 132
16. Working with vhd files ... 134
16.1. Converting tib images into vhd virtual disks and vice versa ... 134
16.1.1. Converting to Windows backup ... 134
16.1.2. Converting to Acronis backup ... 135
16.2. Recovery using vhd files created by Windows Backup ... 136
16.3. Booting from a tib image of your Windows 7 system partition ... 136
16.4. Acronis Boot Sequence Manager ... 137
17. Exploring archives and mounting images ... 139
17.1. Mounting an image ... 139
17.2. Unmounting an image ... 142
18. Searching backup archives and their content ... 143
18.1. Searching ... 143
18.2. Windows Search and Google Desktop integration ... 144
18.2.1. Using Google Desktop with Acronis True Image Home ... 145
18.2.2. Using Windows Search with Acronis True Image Home ... 148
19. Other operations ... 153
19.1. Validating backup archives ... 153
19.2. Operation results notification ... 154
19.2.1. E-mail notification ... 155
19.2.2. WinPopup notification ... 156
19.3. Viewing Tasks and Logs ... 156
19.4. Managing backup archives ... 159
19.5. Consolidating backups ... 160
19.6. Removing backup archives ... 163
19.7. Moving backup archives ... 163

20. Transferring the system to a new disk 165
20.1. General information 165
20.2. Security 165
20.3. Executing transfers 166
20.3.1. Selecting Clone mode 166
20.3.2. Selecting source disk 167
20.3.3. Selecting destination disk 167
20.3.4. Partitioned destination disk 168
20.3.5. Selecting partition transfer method 168
20.3.6. Cloning with manual partitioning 169
20.3.7. Cloning summary 171
21. Adding a new hard disk 172
21.1. Selecting a hard disk 172
21.2. Creating new partitions 172
21.3. Disk add summary 173
22. Security and Privacy Tools 175
22.1. Using File Shredder 175
22.2. Acronis DriveCleanser 176
22.3. Creating custom algorithms of data destruction 179
22.4. System Clean-up 180
22.5. System Clean-up Wizard settings 181
22.5.1. "Data Destruction Method" setting 182
22.5.2. "Files" setting 182
22.5.3. "Computers" setting 183
22.5.4. "Drive Free Space" setting 183
22.5.5. "Commands" setting 184
22.5.6. "Network Places Filter" setting 184
22.6. Cleaning up separate system components 184
23. Troubleshooting 185
23.1. General 185
23.2. Installation issues 185
23.3. Backup and validation issues 186
23.4. Recovery issues 188
23.5. Bootability after recovery issues 188
23.6. Other issues 189
24. Hard Disks and Boot Sequence 192
24.1. Arranging boot sequence in BIOS 192
24.2. Installing hard disk drives in computers 192
24.2.1. Installing an IDE hard disk drive, general scheme 192
24.2.2. Motherboard sockets, IDE cable, power cable 193
24.2.3. Configuring hard disk drives, jumpers 194
24.2.4. Installing a SATA hard drive 195
24.2.5. Steps for installing a new internal SATA drive 195
24.3. Hard Disk Wiping methods 196

24.3.1. Functioning principles of Information wiping methods 196
24.3.2. Information wiping methods used by Acronis 197
25. Startup Parameters 198
25.1. Description 198
26. Index 200

1. Introduction

1.1. What is Acronis® True Image Home?

Acronis True Image Home is an integrated software suite that ensures security of all information on your PC. It can back up the operating system, applications, settings and all of your data, while also securely destroying any confidential data you no longer need. With this software, you can back up selected files and folders, Windows applications' settings, settings and messages of Microsoft e-mail clients — or even the entire disk drive or selected partitions. Acronis Online Backup will allow you to store your most important files on a remote storage, so they will be protected even if your computer gets stolen or your house burns down. Acronis Nonstop Backup continuously saves changes in your system and files (as often as every five minutes) allowing you to rollback easily to any point in time if the need arises.

Should your disk drive become damaged or your system attacked by a virus or malware, you can recover the backed up data quickly and easily, eliminating hours or days of work trying to rebuild your disk drive's data and applications from scratch.

Acronis True Image Home provides you with all the essential tools you need to recover your computer system should a disaster occur, such as losing data, accidentally deleting critical files or folders, or a complete hard disk crash. If failures occur that block access to information or affect system operation, you will be able to recover the system and the lost data easily.

The unique technology developed by Acronis and implemented in Acronis True Image Home allows you to perform exact, sector-by-sector disk backups, including all operating systems, applications and configuration files, software updates, personal settings, and data.

Acronis True Image Home helps you protect your identity as well. Simply deleting old data will not remove it permanently from your computer. Acronis True Image Home now includes Acronis DriveCleanser that permanently destroys files and wipes personal information from partitions and/or entire disks, as well as a wizard that cleans up your Windows system of all traces of user activity.

You can store backups on almost any PC storage device: internal or external hard drives, network drives or a variety of IDE, SCSI, FireWire (IEEE-1394), USB (1.0, 1.1 and 2.0) and PC Card (formerly called PCMCIA) removable media drives, as well as CD-R/RW, DVD-R/RW, DVD+R/RW, BD-R, BD-RE, magneto-optical, Iomega Zip and Jaz drives.

When performing scheduled backup tasks, Acronis True Image Home automatically selects a backup mode (full, incremental, differential) in accordance with the backup policy set by the user.

If you are going to install a new hard disk drive, Acronis True Image Home will help you to transfer information from the old one in minutes, including operating systems, applications, documents, and personal settings. After migrating to the new hard disk you can destroy all confidential information on the old one securely. This is the recommended procedure if you intend to donate, throw away, or sell the old hard disk drive.

Wizards and a Windows Vista-style interface will make your work easier. Just perform a few simple steps and let Acronis True Image Home take care of everything else! When a system problem occurs, the software will get you up and running in no time.

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1.2. Acronis True Image Home basic concepts

This section provides general information about basic concepts which could be useful for understanding how the program works.

Backup

According to Wikipedia, "**backup** refers to making copies of data so that these additional copies may be used to **restore** the original after a data loss event. Backups are useful primarily for two purposes. The first is to restore a state following a disaster (called disaster recovery). The second is to restore small numbers of files after they have been accidentally deleted or corrupted."

Acronis True Image Home provides for both purposes by creating disk (or partition) images and file-level backups respectively. By default, Acronis True Image Home stores in an image only those hard disk parts that contain data (for supported file systems). However, you may use an option that lets you include in an image all of the sectors of a hard disk (so called sector-by-sector backup). When you back up files and folders, only the data, along with the folder tree, is compressed and stored.

Disk cloning

This operation migrates/copies the entire contents of one disk drive to another (e.g., when installing a larger disk) to get two identical drives with the same file structure. The "Disk Clone" tool effectively copies all of the contents of one hard disk drive onto another hard disk drive. The operation allows you to transfer all the information (including the operating system and installed programs) from one hard disk drive to another without having to reinstall and reconfigure all of your software. If you decide to use cloning, the best chance of success is to remove the existing drive from the computer and install the new drive in its place. It should be connected in exactly the same way as the old drive.

Acronis True Image Home does not provide for cloning a single partition. You can clone only an entire drive.

By the way, you can also transfer all the information from your hard disk drive to another one by backing up the entire old hard disk and then recovering the backup to the new disk.

Backup archive components

Archive - Known as archive chain or archive group, it is the whole set of backup files managed by a single backup task. The archive can consist of one or several slices.

Slice - It is a set of files created during each cycle of the task execution. The amount of slices created is always equal to the amount of times the task is executed. A slice represents a point in time, to which the system or data can be recovered.

Volume - It is a tib file associated with the slice. Usually there is only one volume per slice however, each slice may consist of several volumes. If you have set archive splitting in the task options, the resulting slice will be split into several files. In addition, Acronis True Image Home automatically splits a slice into several files of 4GB each (except the last file) when you make a large backup to a FAT32 formatted hard disk. These files are the slice's volumes.

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Snapshots

While creating disk images, Acronis True Image Home uses "snapshot" technology that allows creating even system partition backups while running Windows with files open for reading and writing without the necessity to reboot the computer. Once the program starts the partition backup process, it temporarily freezes all the operations on the partition and creates its "snapshot". Snapshot creation usually takes just several seconds. After that the operating system continues working as the imaging process is under way and you will not notice anything unusual in the operating system functionality.

In its turn, the Acronis driver continues working to keep the point-in-time view of the partition. Whenever the driver sees a write operation directed at the partition, it checks whether these sectors are already backed up and if they are not, the driver saves the data on the sectors to be overwritten to a special buffer, then allows overwriting. The program backs up the sectors from the buffer, so that all the partition sectors of the point-in-time when the snapshot was taken will be backed up intact and an exact "image" of the partition will be created.

Backup file format

Acronis True Image Home saves backup data in the proprietary tib format using compression. This provides for reducing the storage space requirements, as well as for backward compatibility with the previous Acronis True Image Home version. While creating a tib file, the program calculates checksum values for data blocks and adds these values to the data being backed up. These checksum values allow verifying the backup data integrity. However, using the proprietary format means that the data from such backups can be recovered only with the help of Acronis True Image Home itself – either in Windows or in the recovery environment.

Backup archive validation

How can you be sure that you'll be able to recover your system if the need arises? The feature called backup validation provides a high degree of such assurance. As was already said, the program adds checksum values to the data blocks being backed up. During backup validation Acronis True Image Home opens the backup file, re-calculates the checksum values and compares those values with the stored ones. If all compared values match, the backup file is not corrupted and there is a high probability that the backup can be successfully used for data recovery. It is highly recommended to validate system partition backups after booting from the rescue media. For users of Windows 7 Enterprise and Windows 7 Ultimate Acronis True Image Home provides a unique way of ensuring that you will be able to boot from the recovered system partition. The program allows booting from a tib file containing the system partition image, though it first converts the tib file into a VHD used for actual booting. So if you can boot from the converted vhd file, you will be able to boot after recovering this backup to your disk.

Disaster recovery

Recovering from a disaster usually requires a rescue media, because such disaster often means that your operating system does not boot either due to system data corruption (e.g. caused by a virus or malware) or a hard disk failure. When the operating system fails to boot, you need some other means of booting and using Acronis True Image Home to recover the system partition. So to be better prepared for a disaster, you absolutely must have a rescue media. Owners of the boxed product already have a bootable rescue CD. Other legal owners of the program can create a rescue media using the tool called Media Builder.

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To enable booting to the recovery environment, it is necessary to ensure that the BIOS boot sequence includes the rescue media. See Arranging boot sequence in BIOS (p. 192).

Scheduling

For your backups to be really helpful, they must be as "up-to-date" as possible. This means that you should run backup tasks on a regular basis, say once a day. Though creating a backup task in Acronis True Image Home is quite easy, it would be very tedious remembering to do the same thing every day. Well, with the scheduler you do not have to remember. You can schedule backups and forget about them (at least while the backup disk has enough free space or until the need for recovery arises).

The terms related to these concepts will be repeatedly used in the Acronis True Image Home documentation, so understanding the above concepts may be helpful when using the program's features.

1.3. New in Acronis True Image Home 2010

- **Acronis Nonstop Backup** – Near-CDP (Continuous Data Protection) is now available to Acronis True Image Home users. You will be able to revert your documents to previous states in time. This may come in handy when you accidentally deleted an important document or made some corrections that turned out to be wrong and you need to return the document to the state in which it was, for example, two weeks ago. When you need to recover a file, a Windows Explorer-like browser with integrated search makes searching for a file you need to recover very easy. But Acronis Nonstop Backup is much more than a versioning tool. It also provides for recovering your system if you ever need that.
- **Online backup** – you can make your critically important data much more secure by storing it off-site. Because files are stored on a remote storage, they are protected even if your computer gets stolen or your house burns down. So the risk of data loss as a result of fire, theft, or other natural disasters is practically eliminated. And you can safely recover any corrupted, lost or deleted files on your computer. Integrating Online backup into Acronis True Image Home provides a single solution for all your data backup needs.

Acronis Online Backup might be unavailable in your region. To find more information, click here.

- **Powerful scheduler** - The scheduler became more powerful and flexible. We expanded the set of already existing scheduling options. The new scheduler allows you to specify the date when a scheduled task should run for the first time. While scheduling a monthly task, you can use a month calendar for specifying the date (e.g. 1st day of the month) or dates for running the task (e.g. on 10th, 20th, Last day of the month). If you do not need to run a scheduled task for some time, but intend to use it again in the future, you can disable the task for the time being and then re-enable it when required. So it is not necessary to recreate the task from scratch. You can clone a scheduled task and then introduce some minor changes into the duplicate. This may be useful when creating several similar tasks. In combination with a selected backup method and automatic consolidation rules, the scheduler allows implementing various backup strategies.
- **Selective validation** – Earlier versions of Acronis True Image Home could validate only a whole backup archive. Sometimes this may be inconvenient. Suppose, you have a full backup archive with a size of 20GB and a longish chain of differential backups having sizes of several gigabytes each and amounting to 100GB. In this case Acronis True Image Home validated the whole 120GB archive and this could take quite a long time. Now the program will validate just a single selected differential backup and the full one.

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- **Support of dynamic/GPT disks** (provided by separately purchased Acronis Plus Pack) – operations with dynamic/GPT disks expand the range of hard drive configurations supported by Acronis True Image Home. Dynamic disks offer greater flexibility for volume management and may provide benefits in computers with more than one hard drive. GUID Partition Table (GPT) is a new hard disk partitioning scheme providing advantages over the old MBR partitioning scheme. It was introduced as a part of the Extensible Firmware Interface (EFI) initiative.
- **VHD format support** – Virtual Hard Disk (VHD) is a file format containing the complete contents and structure representing a hard disk drive. Furthermore, Windows Backup utility included into Windows Vista (except Home editions) and Windows 7 operating systems now uses this format for backing up an image of the system hard drive when users select the "Complete PC Backup" option. Acronis True Image Home can convert vhd files into tib files and vice versa, recover operating system from vhd files, and even boot from vhd images of Windows 7.
- **Booting from tib images containing Windows 7** – Users of the Windows 7 Enterprise and Windows 7 Ultimate can boot from a tib image containing a backup of their system partition. This will allow testing the bootability of the backed up system without actual recovery. If the operating system boots from the tib file, then it will definitely boot after recovery from that tib file. When you choose a tib file to boot from, Acronis True Image Home creates a temporary vhd file by converting this tib file, so your hard disk must have enough free space for storing it. Then the program adds a new item to the Windows boot loader list. When you select the tib file in the boot loader list, your computer will actually boot from that temporary vhd file.

1.4. System requirements and supported media

1.4.1. Minimum system requirements

The hardware requirements of Acronis True Image Home correspond to the minimum requirements for the operating system installed on the computer to be used for running Acronis True Image Home. In addition Acronis True Image Home requires the following hardware:

- CD-RW/DVD-RW drive for bootable media creation
- Mouse or other pointing device (recommended).

Using Acronis Nonstop Backup requires at least 1 GB RAM.

Acronis True Image Home rescue media has the following hardware requirements:

- 256 MB RAM
- Processor Pentium 1 GHz or faster

The recommended minimum screen resolution is 1152 x 864.

1.4.2. Supported operating systems

Acronis True Image Home has been tested on the following operating systems:

- Windows XP SP3
- Windows XP Professional x64 Edition
- Windows Vista SP2 (all editions)
- Windows 7 (all editions)

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Acronis True Image Home also enables creation of a bootable CD-R/DVD-R that can back up and recover a disk/partition on a computer running any Intel- or AMD- based PC operating system, including Linux®. The only exception is the Intel-based Apple Macintosh, which is currently not supported in native mode.

1.4.3. Supported file systems

- FAT16/32
- NTFS
- Ext2/Ext3 *
- ReiserFS *
- Linux SWAP *

If a file system is not supported or is corrupted, Acronis True Image Home can copy data using a sector-by-sector approach.

** The Ext2/Ext3, ReiserFS, and Linux SWAP file systems are supported only for disk or partition backup/recovery operations. You cannot use Acronis True Image Home for file-level operations with these file systems (file backup, recovery, search, as well as image mounting and file recovering from images), as well as for backups to disks or partitions with these file systems.*

1.4.4. Supported storage media

- Hard disk drives*
- Networked storage devices
- FTP servers**
- CD-R/RW, DVD-R/RW, DVD+R (including double-layer DVD+R), DVD+RW, DVD-RAM, BD-R, BD-RE***
- USB 1.0 / 2.0, FireWire (IEEE-1394) and PC card storage devices
- ZIP®, Jaz® and other removable media

* Acronis True Image Home does not support the following dynamic volume types: Mirrored and RAID-5. There are some additional limitations on operations with dynamic and GPT disks:

  - To perform operations with dynamic and GPT disks, you need separately purchased Acronis Plus Pack
  - Creation of Acronis Secure Zone is not supported.
  - Recovery of a dynamic volume as a dynamic volume with manual resizing is not supported
  - GPT disks can be recovered only "volume-to-volume" without the possibility of resizing
  - Try&Decide cannot be used for protecting dynamic and GPT disks
  - "Clone disk" operation is not supported for dynamic and GPT disks

** An FTP server must allow passive mode file transfers. Data recovery directly from an FTP server requires the archive to consist of files of no more than 2GB each. It is recommended that you change the source computer firewall settings to open Ports 20 and 21 for both TCP and UDP protocols and disable the **Routing and Remote Access** Windows service.

*** Burned rewritable discs cannot be read in Linux without a kernel patch.

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1.5. Customer technical support

Users of legally purchased and registered copies of Acronis True Image Home are entitled to free technical support. If you experience problems installing or using Acronis products that you can't solve yourself by using this guide, then please contact Acronis Technical Support.

More information about contacting Acronis Technical Support is available at the following link: http://www.acronis.eu/homecomputing/support/.

In order to open a support trouble ticket, please fill out the Web form on the Acronis site; support will only open a trouble ticket if it is initiated from this form.

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2. Acronis True Image Home installation and startup

2.1. Installing Acronis True Image Home

To install Acronis True Image Home:

- Run the Acronis True Image Home setup file.
- Before installation, you can check for a newer Acronis True Image Home build on the Acronis Web site. If available, the newer version will be offered for installation.
- In the Install Menu, select the program to install: Acronis True Image Home.
- Follow the install wizard instructions on the screen.

WWW.ACRONIS.COM
Acronis® True Image
Home 2010
Check for Updates
Check for a new version of Acronis True Image Home.
Install Acronis True Image Home
Install Acronis True Image Home to back up and recover data on this computer.
Acronis True Image Home User's Guide
Download the latest version of Acronis True Image Home user's guide.
Technical Support
Contact Acronis technical support service.

Typical, **Custom** and **Complete** installation is available. Having pressed **Custom**, you can choose not to install **Rescue Media Builder**.

With **Rescue Media Builder** you can create bootable rescue disks (see details in Creating bootable media (p. 126)). You might not need this tool if you purchased a boxed product that contains a bootable CD. Installing the **Bootable Rescue Media Builder** will allow you to create bootable media or its ISO image at any time from the main program window or by running **Bootable Rescue Media Builder** on its own.

When installed, Acronis True Image Home creates a new device in the Device Manager list (Control Panel → System → Hardware → Device Manager → Acronis Devices → Acronis True Image Backup Archive Explorer). Do not disable or uninstall this device, as it is necessary for connecting image archives as virtual disks (see Exploring archives and mounting images (p. 139)).

2.2. Extracting Acronis True Image Home

When installing Acronis True Image Home, you can save the setup (.msi) file on a local or network drive. This will help when modifying or recovering the existing component installation.

To save the setup file:

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- Run the Acronis True Image Home setup file.
- In the Install Menu, right-click on the program name and select **Extract**.
- Select a location for the setup file and click **Save**.

Recovering or updating the existing Acronis True Image Home installation with using the .msi file must be done from the command line as follows:

1. Choose **Start** → **Run**
2. Type *cmd*.
3. When the command-line interpreter window opens, type the following command:
   msiexec /i path_to_msi_file\msi_file_name.msi REINSTALL=ALL REINSTALLMODE=vomus

After the install wizard window opens, choose **Typical**, **Custom** or **Complete** installation for repairing or changing the program's components.

2.3. Running Acronis True Image Home

You can run Acronis True Image Home in Windows by selecting **Start** → **Programs** → **Acronis** → **Acronis True Image Home** → **Acronis True Image Home** or by clicking on the appropriate shortcut on the desktop.

If your operating system does not load for some reason, you can run Acronis Startup Recovery Manager. However, this must be activated prior to use; see Acronis Startup Recovery Manager (p. 23) to learn more about this procedure. To run the program, press F11 during bootup when you see a corresponding message that tells you to press that key. Acronis True Image Home will be run in standalone mode, allowing you to recover the damaged partitions.

If your disk data is totally corrupted and the operating system cannot boot (or if you have not activated Acronis Startup Recovery Manager), load the standalone Acronis True Image Home version from the bootable media, supplied with the retail box or created by you using Rescue Media Builder. This boot disk will allow you to recover your disk from a previously created image.

2.4. Upgrading Acronis True Image Home

If you already have Acronis True Image Home installed, the new version will simply update it; there is no need to remove the old version and reinstall the software.

Please keep in mind that the backups created by the later program version may be incompatible with the previous program versions, so if you roll back Acronis True Image Home to an older version, you likely will have to re-create the archives using the older version. We strongly recommend that you create new bootable media after each Acronis True Image Home upgrade.

2.5. Removing Acronis True Image Home

Select **Start** → **Settings** → **Control panel** → **Add or remove programs** → **<Acronis True Image Home>** → **Remove**. Then follow the instructions on the screen. You may have to reboot your computer afterwards to complete the task.

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If you use Windows Vista, select **Start** → **Control panel** → **Programs and Features** → **<Acronis True Image Home>** → **Remove**. Then follow the instructions on the screen. You may have to reboot your computer afterwards to complete the task.

If you have Acronis Secure Zone on your computer, remove it before removing the program itself because removing Acronis True Image Home will not remove the zone.

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3. General information and proprietary Acronis technologies

3.1. The difference between file archives and disk/partition images

A backup archive is a file or a group of files (also called "backups" in this guide), that contains a copy of selected file/folder data or a copy of all information stored on selected disks/partitions.

When you back up files and folders, only the data, along with the folder tree, is compressed and stored.

Backing up disks and partitions is performed in a different way: Acronis True Image Home stores a sector-by-sector snapshot of the disk, which includes the operating system, registry, drivers, software applications and data files, as well as system areas hidden from the user. This procedure is called "creating a disk image," and the resulting backup archive is often called a disk/partition image.

By default, Acronis True Image Home stores only those hard disk parts that contain data (for supported file systems). Furthermore, it does not back up swap file information (pagefile.sys under Windows XP/Vista) and hiberfil.sys (a file that keeps RAM contents when the computer goes into hibernation). This reduces image size and speeds up image creation and recovery. However, you might use the ***Create an image using the sector-by-sector approach*** *option that lets you include all of the sectors of a hard disk in an image.*

A partition image includes all files and folders. This includes all attributes (including hidden and system files), boot record, and FAT (file allocation table); as well as files in the root directory and the zero track of the hard disk with the master boot record (MBR).

A disk image includes images of all disk partitions as well as the zero track with the master boot record (MBR).

By default, files in all Acronis True Image Home archives have a ".tib" extension. Do not change this file extension.

It is important to note that you can recover files and folders not only from file archives, but from disk/partition images too. To do so, mount the image as a virtual disk (see Exploring archives and mounting images (p. 139)) or start the image recovery and select **Recover chosen files and folders**.

3.2. Full, incremental and differential backups

Acronis True Image Home can create full, incremental and differential backups.

A **full backup** contains all data at the moment of backup creation. It forms a base for further incremental or differential backup or is used as a standalone archive. A full backup has the shortest recovery time compared to incremental or differential ones.

An **incremental backup** file only contains data changed since the last backup of any type (full, incremental, or differential). Therefore, it is smaller and takes less time to create, but as it doesn't contain all the data; all the previous backups and the initial full backup are required for recovery.

Unlike an incremental backup, when every backup procedure creates the next file in a "chain", a **differential backup** creates an independent file, containing all changes since the last full backup.

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Generally, a differential backup will be recovered faster than an incremental one, as it does not have to process through a long chain of previous backups.

A standalone full backup might be an optimal solution if you often roll back the system to its initial state or if you do not like to manage multiple files. If you are interested in saving only the last data state to be able to recover it in case of system failure, consider the differential backup. It is particularly effective if your data changes tend to be few compared to the full data volume.

The same is true for incremental backup. These are most useful when you need frequent backups and the ability to roll back to a specific point in time. Having created a full backup once, if you then create an incremental backup each day of a month, you will get the same result as if you created full backups every day. Incremental images are considerably smaller than full or differential images.

Incremental or Differential?

The difference is typically that in an incremental backup, only the files changed or added since the last time the backup ran are added to the archive. With a differential backup, all the files changed or added since the initial full backup, are added to the archive. Thus, differential backups take longer to run than incremental backups. When recovering from an incremental backup, the program must copy the entire initial backup and then step through each of the previous backups to retrieve all the updated files. A differential backup, on the other hand, can be recovered quicker because the software must copy only the original backup and the most recent one.

An incremental or differential backup created after a disk is defragmented might be considerably larger than usual. This is because the defragmentation program changes file locations on the disk and the backups reflect these changes. Therefore, it is recommended that you re-create a full backup after disk defragmentation.

3.3. Backup file naming conventions

Let's remember that Acronis True Image Home may split a full or incremental archive into volumes either when a user sets the splitting option or when a large backup having a size bigger than 4GB is saved to a FAT32 disk. See "Backup archive components" in Acronis True Image Home basic concepts (p. 10).

Though users may assign any name to backups, many would still prefer using automatic naming and the below information may come in handy when viewing the contents of a backup archive storage in Windows Explorer and trying to figure out, e.g. which are full and which are incremental.

1) When you agree to use the One-Click Backup offered during the first start of the newly installed program, the resultant backup file is named "SystemBackup_mm_dd_yyyy.tib", where mm_dd_yyyy is the date of backup creation in the following format: month (one or two digits), day (one or two digits), year (four digits).

When saved to a FAT32 disk, such backup may be split into volumes with the names SystemBackup_mm_dd_yyyy1.tib, SystemBackup_mm_dd_yyyy2.tib, SystemBackup_mm_dd_yyyy3.tib, etc.

As in this case the subsequent automatically scheduled backups will replace the previous one (once every seven days by default) only after the next backup finishes (to keep the old backup in the event of the current backup's failure), the backup filename(s) will be alternately named SystemBackup_mm_dd_yyyy.tib and SystemBackup_mm_dd_yyyy(1).tib.

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2) In some cases when you create a new full backup task at a new destination, the backup gets the name "MyBackup_mm_dd_yyyy.tib".

If a backup is split (either automatically, e.g. due to the 4GB file size limit on FAT32 disks or when configuring a backup task), the constituent backup files (volumes) are named as follows:

MyBackup_mm_dd_yyyy1.tib…MyBackup_mm_dd_yyyyN.tib, where N is the number of volumes

Subsequent incremental or differential backups to this full backup will get the names as follows – MyBackup_mm_dd_yyyy2.tib, MyBackup_mm_dd_yyyy3.tib, etc. (if the full backup is not split) or MyBackup_mm_dd_yyyyN+1.tib, MyBackup_mm_dd_yyyyN+2.tib, etc. For instance, if N=8, incremental or differential backups will get the names MyBackup_mm_dd_yyyy9.tib, MyBackup_mm_dd_yyyy10.tib, etc.

3) When you back up, for example, partitions C and D, the backup gets the name "System_C_D_mm_dd_yyyy.tib".

4) When you perform file-level backups, they are named depending on the backup type:

- My Data backup gets the following name: MyBackup_mm_dd_yyyy.tib;
- System State backup gets the following name: System State_mm_dd_yyyy.tib;
- My E-mail backup gets the following name: Email_mm_dd_yyyy.tib; and
- My Application Settings backup gets the following name: Application Settings_mm_dd_yyyy.tib.

5) If you right-click on a folder in Windows Explorer and choose Back Up in the shortcut menu, the backup file gets the name of the folder with appended date, e.g. My Documents_mm_dd_yyyy.tib.

If you right-click on a file in Windows Explorer and choose Back Up in the shortcut menu, the backup file gets the name of the file with appended date, i.e. filename_mm_dd_yyyy.tib.

If you select in Windows Explorer several files in the same folder and then choose Back Up in the shortcut menu, the backup file gets the name of the folder with appended date, e.g. My Documents_mm_dd_yyyy.tib.

If you select in Windows Explorer two or more folders and then choose Back Up in the shortcut menu, the backup file gets the name of the parent folder or disk letter (when you selected folders in the root directory) with appended date, e.g. My Documents_mm_dd_yyyy.tib or C_mm_dd_yyyy.tib.

6) When you rename backups on the Data recovery and backup management screen, a backup is renamed only in the program's metadata database; however, backup file names on the disk remain unchanged.

3.4. Acronis Secure Zone™

The Acronis Secure Zone is a secure partition that enables keeping backup archives on a managed machine disk space and therefore recovery of a disk to the same disk where the backup resides. In the Acronis True Image Home wizards' windows, the zone is listed along with all locations available for storing archives.

Certain Windows applications, such as Acronis disk management tools, can access the zone.

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When you create Acronis Secure Zone, an icon appears under **My Computer** in the **Other** section. Double-clicking on the Acronis Secure Zone icon opens the zone and you can view all the backup archives it contains. You can also open the zone by right-clicking on its icon and choosing **Open** in the shortcut menu. Double-clicking on an archive opens it and shows all backups (full, incremental, differential) belonging to the archive. Right-clicking on a specific backup opens the shortcut menu allowing to choose a desired operation – mount (for image archives), recover, validate, update, remove the backup, and view the backup's details. If Acronis Secure Zone is password-protected, any operation except viewing backup details will require entering the password. Double-clicking on a backup will start the default operation (**Mount** for image backups and **Recovery** for data backups).

The shortcut menu that appears after right-clicking on the Acronis Secure Zone icon has two more items – **Create Shortcut** (for placing it on the Desktop) and **Explore** for exploring the zone contents. Choosing **Explore** opens Windows Explorer with Acronis Secure Zone selected on the directory tree enabling you to explore the zone contents.

The Acronis Secure Zone is available as a location to store backup files as long as it has free space. If there is not enough space, older backups will be deleted to create free space.

Acronis True Image Home uses the following approach to clean up Acronis Secure Zone:

- If you are in the process of creating a backup and there is not enough free space in the zone to create it, the program will display a dialog which warns you that the Acronis Secure Zone is full. You can click **Cancel** to cancel the backup operation. In that case, you may want to increase the size of the Acronis Secure Zone and then run the backup operation again. If you want to free up some space in the zone, click **OK** and the oldest full backup of the type being created will be deleted with all subsequent incremental/differential backups, then the backup operation will recommence.
- If deleting the oldest backup does not free up enough space, you will get the same warning message again. You may delete the next oldest backup (if any) and repeat this until all the previous backups are deleted.
- If after deleting all the previous backups there is still not enough space for completing the backup, you will get an error message and the backup will be canceled.

The program distinguishes only two types of backups in the zone: disk image backups and file-level backups. My Data, System State, My E-mail, and My Application Settings backups are considered as file-level type backups. For example, if you have an e-mail backup (My E-mail) in the zone and there is not enough space for backing up a folder (My Data), the program will delete the e-mail backup to free up space for the folder backup.

You can back up data automatically on a schedule (see Scheduling tasks (p. 111)). In order to not worry about zone overflow during a scheduled backup, it is recommended to select the **When not enough space in ASZ, delete the oldest archive** box in the Backup options (Error handling) and the scheduled backup task options. However, if you keep long chains of incremental backups, it will be good practice to periodically check the free space in the zone.

For information on how to create, resize or delete Acronis Secure Zone using this wizard, see Managing Acronis Secure Zone (p. 121).

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3.5. Acronis Startup Recovery Manager

3.5.1. How it works

The Acronis Startup Recovery Manager lets you start Acronis True Image Home without loading the operating system. With this feature, you can use Acronis True Image Home by itself to recover damaged partitions, even if the operating system won't start up for some reason. As opposed to booting from Acronis removable media, you will not need a separate media or network connection to start Acronis True Image Home.

3.5.2. How to use

To be able to use Acronis Startup Recovery Manager at boot time, prepare as follows:

1. Install Acronis True Image Home.
2. Activate Acronis Startup Recovery Manager. To do so, click **Activate Acronis Startup Recovery Manager** and follow the wizard's instructions.

When Acronis Startup Recovery Manager is activated, it overwrites the master boot record (MBR) with its own boot code. If you have any third-party boot managers installed, you will have to reactivate them after activating the Startup Recovery Manager. For Linux loaders (e.g. LiLo and GRUB), you might consider installing them to a Linux root (or boot) partition boot record instead of MBR before activating Acronis Startup Recovery Manager.

If a failure occurs, turn on the computer and press F11 when you see the "Press F11 for Acronis Startup Recovery Manager" message. This will start a standalone version of Acronis True Image Home that differs only slightly from the complete version.

Be careful! Drive letters in standalone Acronis True Image Home might sometimes differ from the way Windows identifies drives. For example, the D: drive identified in the standalone Acronis True Image Home might correspond to the E: drive in Windows.

You won't be able to use the previously activated Acronis Startup Recovery Manager if the Try&Decide mode is started.

3.6. Viewing disk and partition information

You can change the way data is represented in all schemes you see in various wizards.

The header may have up to three icons: **Columns, Arrange Icons by** and **Disk properties,** the latter duplicated in the context menu opened by right-clicking objects.

To sort messages by a particular column, click the header (another click will switch the messages to the opposite order) or the **Arrange Icons by** button and select the column.

To select which columns to view, right-click the headers line or left-click the **Columns** button. Then flag the columns you want to display. When left-clicking the **Columns** button, you can also change the display order of columns using the **Move Up** and **Move Down** buttons.

If you click the **Disk properties** button, you will see the selected partition or disk properties window.

This window contains two panels. The left panel contains the properties tree and the right describes the selected property in detail. The disk information includes its physical parameters (connection type, device type, size, etc.); partition information includes both physical (sectors, location, etc.), and logical (file system, free space, assigned letter, etc.) parameters.

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You can change the width of a column by dragging its borders with the mouse.

3.7. What is Try&Decide™?

The Acronis True Image Home Try&Decide feature allows you to perform potentially dangerous operations such as software installation or opening e-mail attachments without putting your PC at risk. It does this by creating essentially a controlled, secure, temporary workspace that is insulated from the rest of your computer. If the system crashes or your computer stops responding during these operations, you should revert the system to the previous state by discarding changes made in the Try&Decide mode. If operations are successful, you have the choice of applying the changes to the real system. (For more details see Try&Decide (p. 105))

3.8. Acronis DriveCleanser, File Shredder, and System Clean-up

Acronis True Image Home contains utilities for secure destruction of data on an entire hard disk drive, individual partitions, as well as for erasing individual files and eliminating user system activity traces. When replacing your old hard drive with a new, higher-capacity one, you may unwittingly leave on the old disk lots of personal and confidential information that can be recovered, even if you have reformatted it.

The Acronis DriveCleanser provides for the destruction of confidential information on hard disk drives and/or partitions with the help of techniques that meet or exceed most national and state standards. You can select an appropriate data destruction method depending on the importance of your confidential information.

The File Shredder provides the same capabilities for individual files and folders.

Finally, the System Clean-up wizard ensures elimination of all your activity traces; while working with a PC, you leave thousands of bytes of evidence showing your actions (records in various system files) that you don’t even know about. This could include user names and passwords, as well as other personal information that could be used to steal your identity if it fell into the wrong hands. This utility wipes them completely from the disk drive.

3.9. Support for Zip format

Now you will be able to retrieve files from backups anywhere without using Acronis True Image Home, if you choose the zip format instead of the tib format. You can back up files, for example, to a USB stick and retrieve files from such archives on your notebook at home without installing Acronis True Image Home, because the most widely used operating systems, namely Microsoft Windows and Mac OS X have built-in support of the zip file format.

Please, be aware that built-in support of zip files in Windows does not cover operations with multivolume zip archives, and zip archives exceeding 4GB in size or which contain files of more than 4GB each.

The Zip format is available when backing up files and/or folders as well as when making reserve copies of your backups. Acronis True Image Home provides for the zip format most of the functionality available for the tib format, except password protection and encryption – you can schedule backups, validate zip backup archives, recover files and folders from zip archives, make incremental and differential backups, and so on.

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Acronis True Image Home can recover and validate only its own zip archives. If a zip archive was created by a file archiver program, it cannot be recovered and validated by Acronis True Image Home.

3.10. Acronis Nonstop Backup

Acronis Nonstop Backup provides easy protection of your disks and files, and allows you to recover both entire disks and individual files and even their versions from disaster. By default Nonstop Backup will protect your system partition, though you can select other partitions and disks for protection as well.

Once you start Acronis Nonstop Backup, it will perform an initial image backup of the partition(s) selected for protection. Having finished this task, Acronis Nonstop Backup will save changes in your system and files (including open ones) every five minutes, so you will be able to recover your system to an exact state in time.

States of the protected partitions will be backed up at 5-minute intervals for the last 24 hours. The older backups will be consolidated in such a way that Acronis True Image Home will keep daily backups for the last 30 days and weekly backups until all Nonstop Backup storage space is used.

3.11. Booting from system image tib files

Users of the Enterprise and Ultimate editions of Windows 7 can now test whether they will be able to boot from the recovered system partition. Acronis True Image Home allows booting from a tib file containing a system partition image. So if you are able to boot from such backup, you almost certainly will be able to boot after an actual system recovery from that backup. When you choose a tib file to boot from, Acronis True Image Home creates a temporary vhd file by converting this tib file, so your hard disk must have enough free space for storing it. Then the program adds a new item to the Windows boot loader list. When you select the tib file in the boot loader list, your computer will actually boot from that temporary vhd file. After testing the bootability of the tib file, you can remove the file from the boot loader list and delete the temporary vhd file, though you can keep it.

3.12. Acronis Universal Restore

3.12.1. Purpose of Acronis Universal Restore

Universal Restore is part of Acronis Plus Pack which is purchased separately, has its own license, and is installed from its own setup file. You need to re-create bootable media to make the newly installed Universal Restore add-on operational in the bootable recovery environment.

A system disk image can be restored easily on the hardware where it was created or to identical hardware. However, if you change the motherboard or use another processor version — a likely possibility in case of hardware failure — the recovered system could refuse to boot. An attempt to transfer the system to a new, much more powerful computer will usually produce the same unbootable result, because the new hardware is incompatible with the most critical drivers included in the image.

Using Microsoft System Preparation Tool (Sysprep) does not solve this problem, because Sysprep permits replacing drivers only for Plug-and-Play devices (sound cards, network adapters, video cards etc.). As for system Hardware Abstraction Layer (HAL) and mass storage device drivers, they must be identical on the source and the target computers (see Microsoft Knowledge Base, articles 302577 and 216915).

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Acronis Universal Restore technology provides an efficient solution for hardware-independent system restoration by replacing the crucial Hardware Abstraction Layer (HAL) and mass storage device drivers.

Acronis Universal Restore is applicable for:

1. Instant recovery of a failed system on different hardware
2. Hardware-independent cloning of operating systems

3.12.1.1. Limitations in using Acronis Universal Restore

1. The system recovered by Acronis Universal Restore might not start if the partition structure in the image or the target disk partitioning does not coincide with that of the source disk. As a result, the loader restored from the image will point to the wrong partition and the system will not boot or will malfunction.

This may occur if you:

- back up only selected partitions but not the entire source disk
- restore not the entire source disk, but only the selected partitions. In some cases, especially if your system resides on a partition other than the first, this can confuse the loader and prevent the restored system from startup.

To avoid the problem, we recommend that you back up and restore the entire system disk.

2. The Acronis Universal Restore option does not work if a computer is booted with Acronis Startup Recovery Manager (using F11) or the backup image is located in Acronis Secure Zone. This is because Acronis Startup Recovery Manager and Acronis Secure Zone are primarily meant for data recovery on the same computer.

3.12.2. General principles of Acronis Universal Restore

1. Automatic selection of HAL and mass storage drivers

Acronis Universal Restore searches the Windows default driver storage folders (in the image being restored) for HAL and mass storage device drivers and installs drivers that best fit the target hardware. You can specify a custom driver repository (a folder or folders on a network drive or CD) which will also be used to search for drivers. In addition, Acronis Universal Restore can search drivers on removable media.

The Windows default driver storage folder is determined in the registry key

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\Current version\DevicePath. This storage folder is usually WINDOWS/inf.

2. Installing drivers for Plug-and-Play devices

Acronis Universal Restore relies on the built-in Plug-and-Play discovery and configuration process to handle hardware differences in devices that are not critical for the system start, such as video, audio and USB. Windows takes control over this process during the logon phase, and if some of the new hardware is not detected, you will have a chance to install the drivers for it later manually.

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4. Preparing for disaster recovery

4.1. How to prepare for disaster as best as you can

Let us remind you of Murphy's Law: "Whatever can go wrong will go wrong" (and at the worst possible time, in the worst possible way). And some people say that Murphy was an incurable optimist. So be warned – your computer may crash and will eventually crash (and maybe just at the worst possible moment). We may interpret Murphy's Law the other way around – it is vitally important to consider all the possible things that can go wrong and act so as to prevent them. The best way to counteract a possible disaster is by taking the necessary precautionary measures:

1) To be better prepared for a disaster, you need to make a full backup of your system disk (or at the very least the partition containing Windows and your applications). To make this task easier, Acronis has provided the One-Click Backup feature that allows you to back up the system partition and MBR during the first start of the newly installed program. If you decide not to use the One-Click Backup, e.g. because the external hard drive you plan to use for your backups has not been attached at that time or because you plan to back up more than just the system partition, please, make such a backup as soon as possible.

2) Whenever possible, you should store your system drive image on a hard drive other than your primary hard disk C:, preferably on an external one. This gives an additional guarantee that you will be able to recover your system if your primary hard disk drive fails. Furthermore, it is usually better to keep your personal data separate from your operating system and applications, for example, on disk D:. Such an arrangement speeds up the creation of your system and data disks (or partitions) images and reduces the amount of information you will need to recover. This makes the backup file of your system disk much smaller and recovery can be easier. In its turn, the smaller the backup file size, the less chance of its corruption and the less time required for your system recovery.

3) If you store your data (documents, videos, photos, etc.) on a non-system disk, e.g. using the arrangement described in item 2), it needs to be backed up too. You can either back up the folders containing your data or create a data disk image. Remember that the imaging procedure is much faster than copying files and could speed up the backup process significantly when it comes to backing up large volumes of data. Incidentally, if the image file becomes corrupted for some reason, it is sometimes possible to mount the image and save most files and folders by copying them from the mounted image using Windows Explorer.

4) As recovery of your system from a disaster in most cases will be done after booting from the rescue media, you **must** test the rescue media as described in the next section - Testing bootable rescue media (p. 28).

4.1.1. Recommendations for testing that your backups can be used for recovery

1) Even if you start recovery of the active partition in Windows, the program will reboot into the Linux environment after the recovery process starts because Windows cannot be left running while the recovery of its own partition is being carried out. So you will recover your active partition under the recovery environment in all cases. If you have a spare hard drive, we strongly recommend you to try a test recovery to this hard drive booting from the rescue media which uses Linux. If you do not have a

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spare drive, please, at least validate the image in the recovery environment. A backup that can be read during validation in Windows, **may not always be readable under Linux environment**.

When you use the Acronis True Image Home rescue media, the product creates disk drive letters that might differ from the way Windows identifies drives. For example, the D: drive identified in the standalone Acronis True Image Home might correspond to the E: drive in Windows. To be on the safe side, it is advisable to assign unique names to all partitions on your hard drives. This will make finding the disk containing your backups easier.

2) It may also be useful to complete all the steps in the Recovery Wizard right up to the Summary screen, but not click the Proceed button. This will allow you to simulate the recovery process and to make sure that Acronis True Image Home recognizes both the drive containing your backups and the target drive. After completing all the Recovery Wizard's steps click **Cancel** on the Summary screen. You may repeat this until you feel sure of your settings and choices.

3) Users of the Enterprise and Ultimate editions of Windows 7 now have a way of testing whether they will be able to boot from the recovered system partition. Acronis True Image Home allows booting from a tib file containing a system partition image (though it is converted into a VHD, which is used for actual booting). So if you are able to boot from such backup, you almost certainly will be able to boot after an actual recovery from that backup.

4.1.2. Additional recommendations

1) Many IT professionals recommend that you have at least two copies of your system backup (three are even better). To be on the safe side, it is further recommended to keep one copy of a backup in a different location from the other (preferably on other premises – for example, at work or at a friend's home, if you use the backed up computer at home). One more argument in favor of several backups: when starting recovery, Acronis True Image Home deletes the target partition (or disk), so when you have just a single backup, the moment the system partition is deleted on the computer being recovered you are at great risk - the only thing you have is the image being recovered and if it is corrupted you are in big trouble.

2) It is better to format the hard drive used for storing your backups to the NTFS file system rather than FAT32. This is due to the 4GB file size limit on FAT32 disks. So if your backup has a size of about 100GB, Acronis True Image Home will split it into 25 files. When there are several such full backups on the hard disk, the number of files will multiply accordingly. This may be inconvenient if, for example, you would like to move the backup to another location using Windows Explorer.

3) If you have only one computer at home, it is advisable to print some information that may be helpful in recovering from a disaster, because you may not be able to use the Internet. Keep the printed material in a safe place along with the rescue CD/DVD or another rescue media.

4.2. Testing bootable rescue media

To maximize the chances of your computer's recovery if need arises, you must test that your computer can boot from the rescue media. In addition, you must make sure that the recovery media contains all drivers required for operation of your mass storage devices and network adapter.

1) If you purchased a boxed version of the product that has a bootable CD, please, make sure that your computer can boot from this CD. Though Acronis try to place drivers for the latest hardware on the bootable CD, an almost infinite variety of hardware configurations exist, so we cannot give you a one hundred percent guarantee of being able to boot from the rescue CD.

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2) If you purchased the program after downloading it, you absolutely must create a bootable rescue CD (or other rescue media, for example, a USB stick) following the recommendations given in the User's Guide or program's Help and then make sure this rescue media is bootable on your computer.

You must configure your computer so as to enable booting from the rescue media and make your rescue media device (CD-ROM/DVD-ROM drive or USB stick) the first boot device. See Arranging boot sequence in BIOS (p. 192);

In case you have a rescue CD, press a key to start booting from the CD, as soon as you see the prompt "Press any key to boot from CD". If you fail to press a key within five seconds, you will need to restart the computer. When using other rescue media, the procedure will be similar.

3) After the computer boots into the recovery environment, check that it detects all the hard drives you have in your system, including external ones, if you use them for storing backups. Incidentally, you must attach the external drive(s) before booting from the rescue media, otherwise the recovery environment might not detect the drive(s).

4) If you store your backups on the network, you should also check that you can access the network in the recovery environment. When booted from the rescue media, Acronis True Image Home might not detect the network. If no computers are visible on the network, but the **Computers near me** icon is found under **My Computer**, ensure that a DHCP server is running on your network. If you don't use a DHCP server, specify network settings manually in the window available at Tools & Utilities → Options → Network adapters.

If the **Computers near me** icon is not available under **My Computer**, there may be problems either with your network card or with the card driver shipped with Acronis True Image.

Selecting video mode when booting from the rescue media

When booting from the rescue media the optimal video mode is selected automatically depending on the specifications of your video card and monitor. However, sometimes the program can select the wrong video mode, which is unsuitable for your hardware. In such case you can select a suitable video mode as follows:

1. Start booting from the rescue media. When the boot menu appears, hover the mouse over Acronis True Image Home (Full version) item and press the F11 key.

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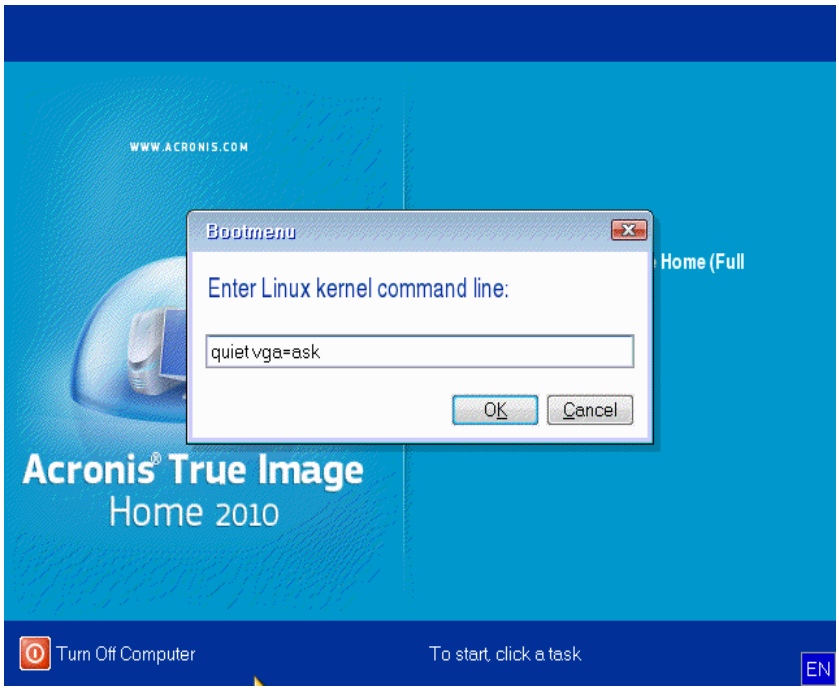
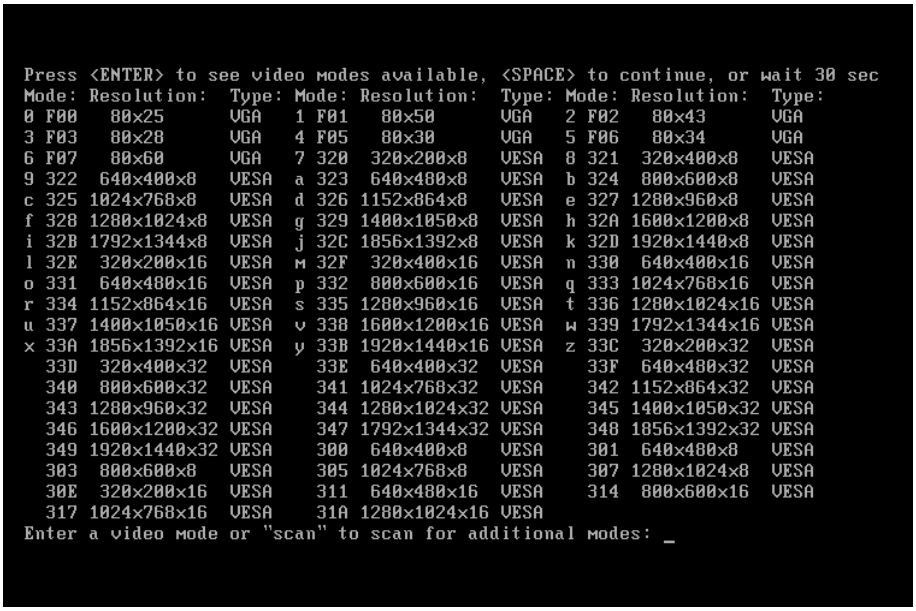
2. When the command line appears, type "vga=ask" (without quotes) and click **OK**.



3. Select Acronis True Image Home (Full version) in the boot menu to continue booting from the rescue media. To see the available video modes, press the Enter key when the appropriate message appears.

4. Choose a video mode you think best suitable for your monitor and type its number in the command line. For instance, typing 338 selects video mode 1600x1200x16 (see the below figure).



Incidentally, when there is a digit or letter before a three-digit number, you can also select such video mode by typing the corresponding single digit or letter ("v" in our instance).

5. Wait until Acronis True Image Home (Full version) starts and make sure that the quality of the Welcome screen display on your monitor suits you.

To test another video mode, close Acronis True Image Home and repeat the above procedure.

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After you find the optimal video mode for your hardware, you can create a new bootable rescue media that will automatically select that video mode.

To do this, start Acronis Media Builder, select the required media components, and type the mode number with the "0x" prefix (0x338 in our instance) in the command line at the "Bootable media startup parameters" step, then create the media as usual.

4.3. Creating a custom rescue CD

If the recovery environment cannot detect some of the hard disk drives or the network adapter, usually there is a problem with the drivers. Acronis rescue CD cannot contain drivers for all hardware on the market. So when the standard rescue CD lacks some of your hardware drivers, you need to create a custom one.

The Linux-based recovery environment used by Acronis does not provide the ability for users to add new drivers. Because of this, you should request Acronis Customer Service Department to create a custom rescue CD that will have all the drivers you need.

Before making a request, collect the information about your system. Select **Generate System Report** in the Help menu. Acronis True Image Home will automatically collect the required information and display a list of what is collected in the report. In the process of creating the report the program may install some components required for collecting the necessary information. When the report is complete, click **Save As** and select the desired folder or leave the default **My Documents** folder. The program will archive the report into a zip file. Send the file to the Acronis Customer Service Department. They will build an iso image of a custom rescue media compatible with your computer hardware and send you an iso file. Burn this file to a CD/DVD using a program that can handle iso files such as Nero. Incidentally, this report may also be useful when you request the Acronis Customer Service Department to help you with a problem.

After burning your custom rescue CD, test it to make sure that your hard disk drives and network adapter are now detected in the recovery environment.

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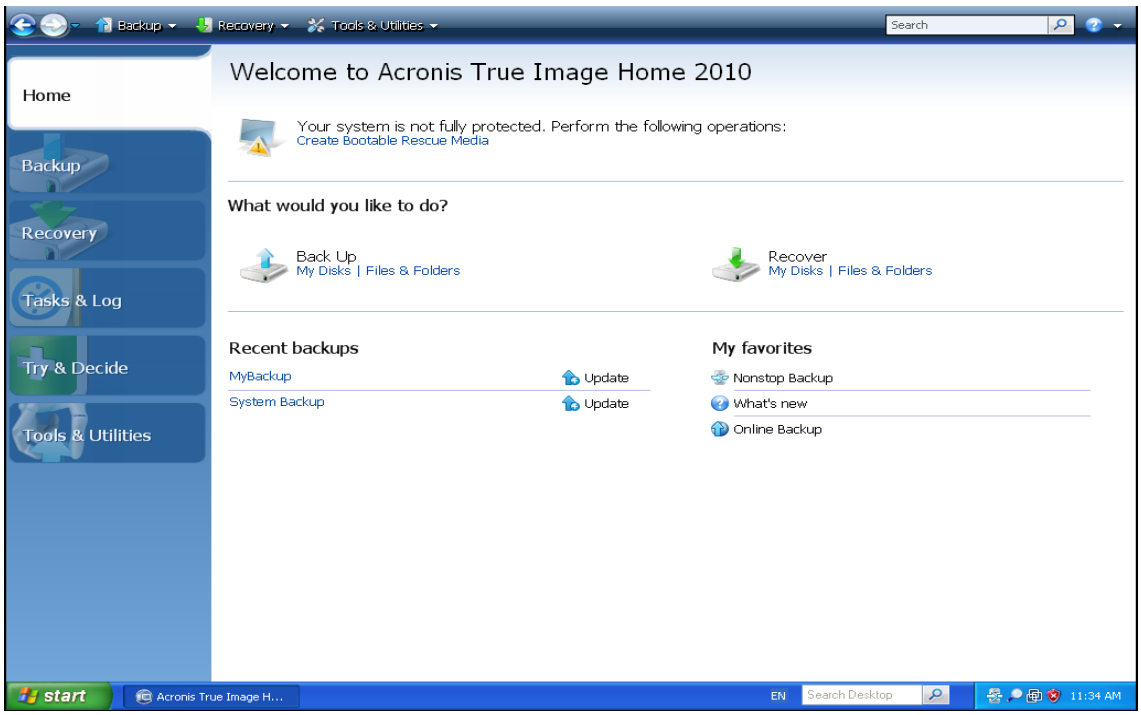
5. Getting to know Acronis True Image Home

5.1. Program workspace

Starting Acronis True Image Home takes you to the Welcome screen. This screen provides quick access to backup and recovery features, as well as highlights any issues with your system's protection.

Your system is considered fully protected when it is backed up and a bootable rescue media is created. If some of the aforementioned have not been done, Acronis True Image Home shows the following links allowing to solve the protection issues: Back Up My System, Create Bootable Rescue Media. After an issue is solved, the corresponding link disappears.



Clicking the items in the right pane takes you to the corresponding screen where you can either start the backup or recovery task immediately or make further selections.

The **My favorites** area in the right pane lists the features you have used most often and provides shortcuts to them in case you would like to use the features again. The **Recent backups** area lists the backups you have recently run and allows you to update the backup archives with just one click.

You can easily access the Acronis True Image Home features through the so called *sidebar* occupying the left side of the screen. Choosing an item on the sidebar takes you to a screen, where you can access the corresponding features.

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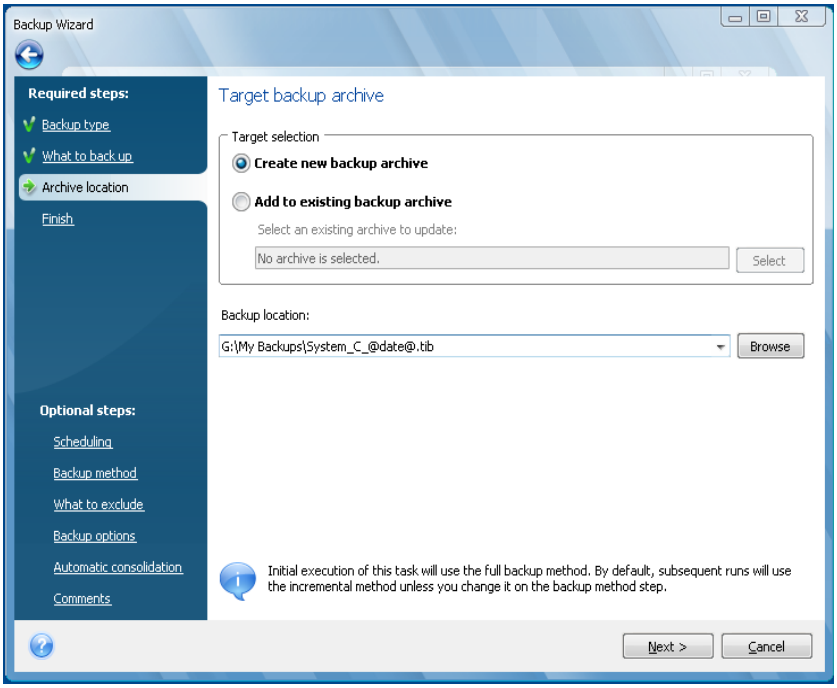
Acronis True Image Home uses wizards, which guide you through many operations. Like the main program window, wizards also have the sidebar listing all the steps (both required and optional) needed for completing the operation. For example, see the Backup Wizard screen shot below.



The completed steps are marked with green checkmarks. The green arrow shows the current step. After you complete all the required steps and come to the **Finish** step, the program displays the Summary screen. If you wish to omit the optional steps, read the summary of the operation to be performed (to make sure that the default settings satisfy you) and then click **Proceed** to start the task. Otherwise, click **Options** to go to the optional steps where you can change the default settings for the current task.

Taskbar notification area icons

During most of the operations, special indicator icons appear in the Windows taskbar notification area (the right portion of the status bar with the clock). If you mouse over the icon, you will see a tool tip indicating the operation's progress or state. Right-clicking on the icon opens a shortcut menu where you can change operation's status or cancel the operation if necessary. This icon doesn't depend on the main program window being open. It is present for background execution of scheduled tasks as well.

5.2. Acronis One-click Backup

The Acronis One-Click Backup tool allows you to begin protecting your computer as soon as you install Acronis True Image Home. During installation the program creates Acronis One-Click Backup shortcut on the desktop.

Double-clicking the shortcut starts the One-Click Backup tool, which automatically backs up your system partition and the Master Boot Record (MBR) to a location it considers the optimum place for backups. If there is no suitable location for the backup, the program displays an error message.

By the way, later you will be able to refresh the system partition backup by double-clicking the shortcut again.

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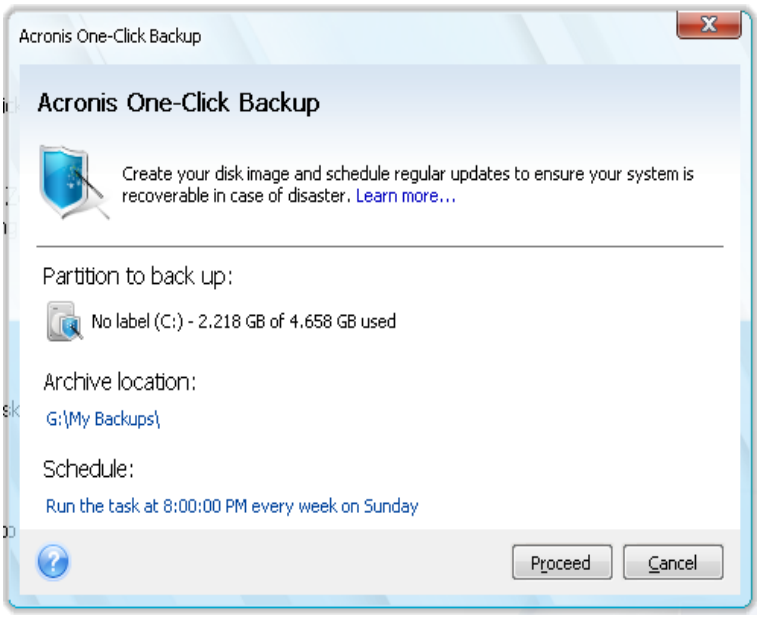
If you choose to not use the One-Click Backup shortcut, Acronis True Image Home will offer to perform One-Click Backup during the first start after installation, as well as schedule subsequent full backups – see the screen shot below.

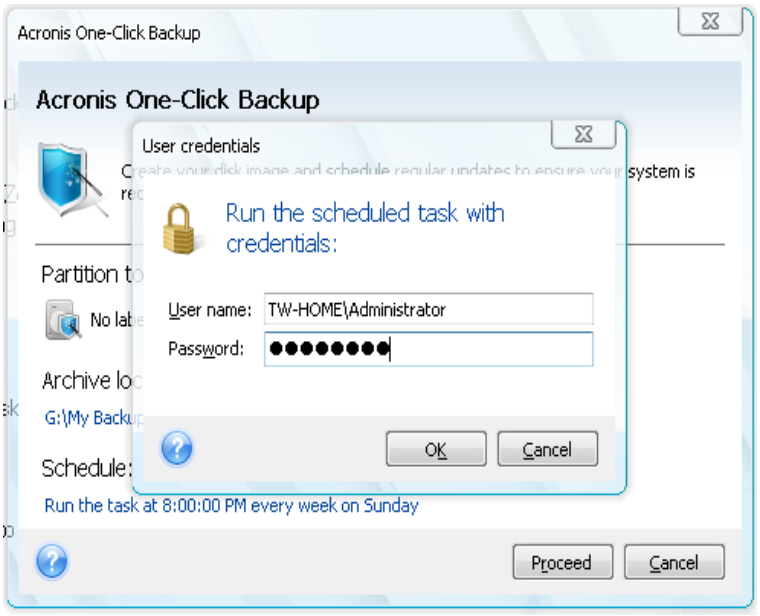
The Acronis One-Click Backup tool performs only full backups of the system partition; scheduling an incremental or differential backup is not possible. In addition, it does not support backup of drives protected by BitLocker Drive Encryption in Windows Vista.


Acronis One-Click Backup
Acronis One-Click Backup
Create your disk image and schedule regular updates to ensure your system is recoverable in case of disaster. Learn more...
Partition to back up:
No label (C:) - 2.218 GB of 4.658 GB used
Archive location:
G:\My Backups\
Schedule:
Run the task at 8:00:00 PM every week on Sunday
Proceed
Cancel

As we already mentioned, Acronis True Image Home offers the optimum place for backups.

If you would prefer another storage location, click the link with the default path to the location under the **Archive location:** line and select the storage location most suitable for you.

Clicking **Proceed** will start the backup task. But before proceeding with the backup, the program will ask you under whose user credentials the subsequent scheduled backups will run.



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Clicking **Cancel** will cancel One-Click Backup. If you decide to use this feature later, select **Tools & Utilities** on the sidebar and then choose **One-Click Backup** in the right pane of the screen.

In case the archive storage location is a USB flash drive, the backup will begin automatically when the device is plugged in but only if a scheduled backup has been missed. The USB flash drive must be the same as the one used for all previous backups; if you plug in another flash drive, the backup process won't start.

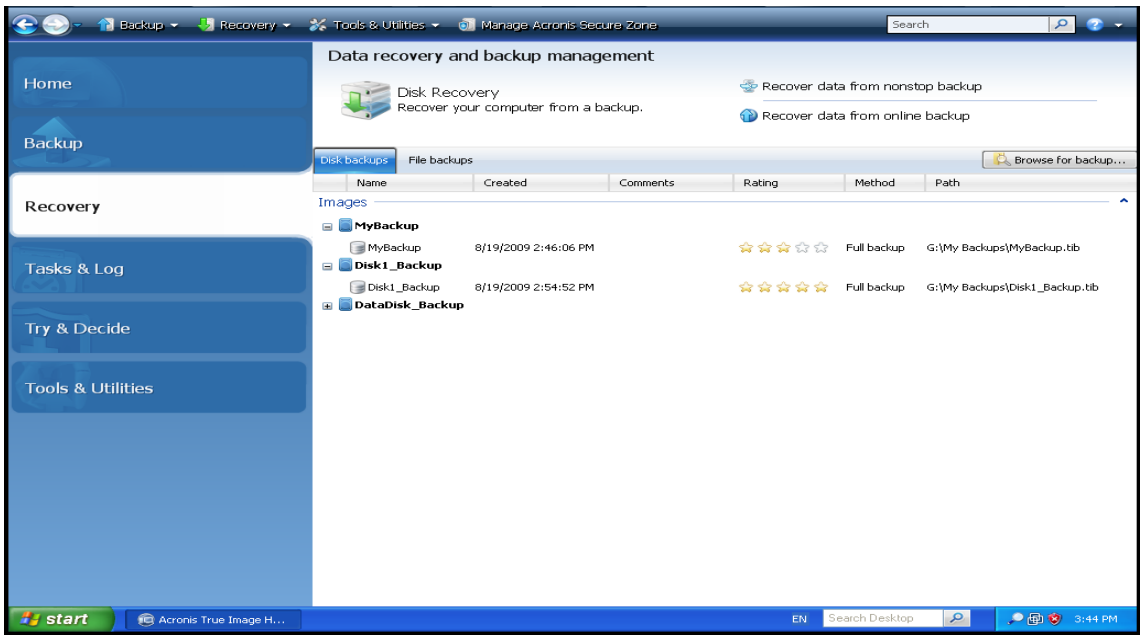
The system will always keep the last backup archive. When a task for the current backup finishes, the old backup is deleted – freeing up space for the next One-Click Backup.

If there is not enough free space on your PC, the program will notify you that it cannot back up your system and will suggest that you specify a destination for backup yourself.

5.3. Main screens

And now let's get acquainted with some of the other screens you will use while working with Acronis True Image Home.

To go to one more screen of interest, click **Recovery** on the sidebar.



The **Data recovery and backup management** screen gives detailed information on your backup archives and provides for quickly performing operations on these archives – Recover, Validate, Move, Remove, Consolidate, Update, Explore backup archives, as well as Mount, Convert image backups by right-clicking on an archive and choosing the required operation. This starts the appropriate wizard or performs the appropriate action.

In addition, this screen provides for recovery of your data from Nonstop Backup and Online Backup storages by clicking the appropriate link.

Here you can also edit comments for backups, see detailed information on the backups, and assign ratings to your backups. For instance, you may want to assign a high rating to an important backup. A backup rating is indicated by the number of "stars" in the **Rating** column (more stars means a higher rating). The default rating is three stars, but you can raise or lower it by clicking on the stars in the

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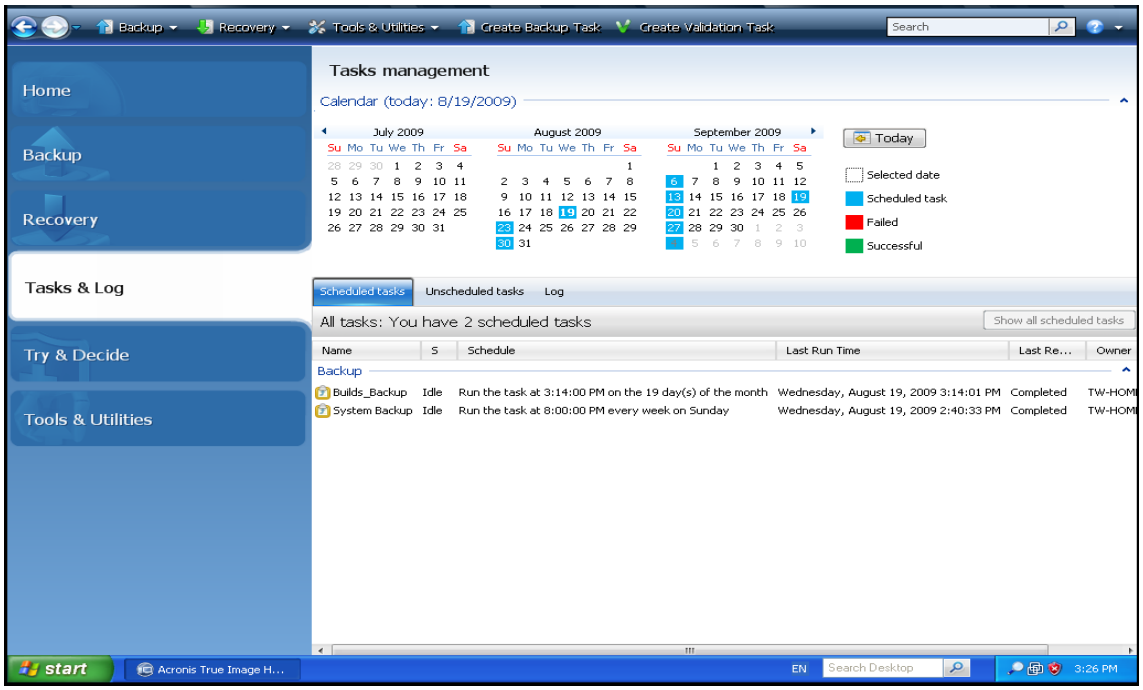
column. The assigned backup ratings may be helpful, for example, when sometime later you will need to consolidate the backups stored in an archive – it will be easier to choose which backups to keep after consolidation. For more information on manual backup consolidation see Consolidating backups (p. 160). In addition, these ratings might save you a lot of time you will otherwise spend on exploring multiple files in your backup archives, trying to guess which of the outdated backups can be deleted without losing important data.

Furthermore, this screen shows the results of searches for backup archives and their content. To perform a search, enter a search string into the Search field at the top right of the Acronis True Image Home window and then click the magnifying glass icon. For more information see Searching (p. 143).

Another useful screen shows the log of program operations and scheduled tasks. A calendar provides quick access to the logs (for past dates) or tasks (for future dates). You just click on a desired date. For more information see Viewing Tasks and Logs (p. 156).



We will not bore you with a description of other screens, because many of them are self-explanatory and some are described in the appropriate chapters of this guide. In addition, you can always open contextual help by clicking the corresponding button.

Incidentally, you can also select most of the features through the main program menu, which is always at your disposal on the toolbar.

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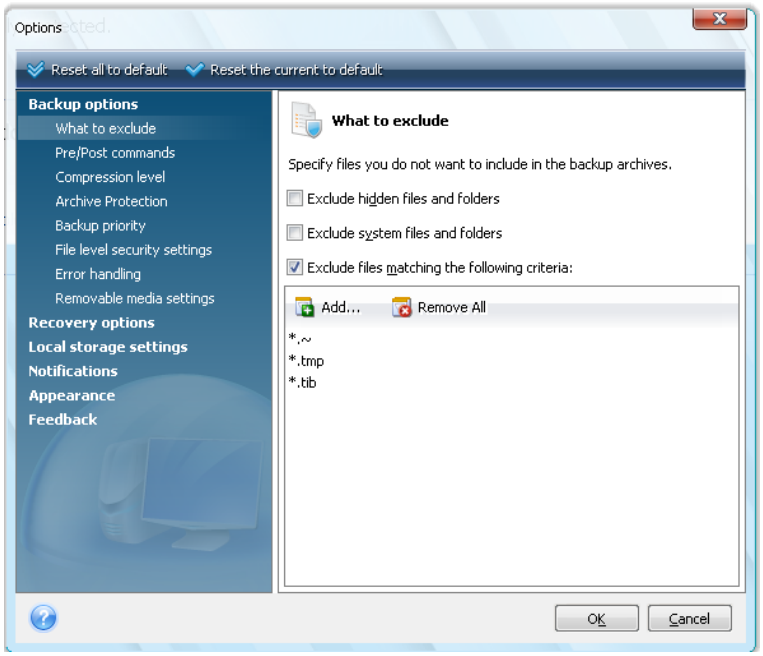
5.4. Options screen

Acronis True Image Home has options related to its appearance and various program functions. To view or edit the default options, choose **Tools & Utilities**→ **Options** in the main program menu.



The **Backup options** item provides for making settings to be used by default in any backup task. You can modify the settings depending on your backup needs. For detailed information on the backup options and possible settings see Fine-tuning your backups (p. 77). In addition, you can change the backup options while configuring a specific backup task. In such case the changed options will be used only for this task.

Similarly, the **Recovery options** item provides for making settings to be used by default by any recovery task. For detailed information on the recovery options and possible settings see Setting default recovery options (p. 101). As with the backup options, you can change the recovery options for a specific recovery task.

The **Local storage settings** item provides for making other settings related to the backup process, for example, they may have a more or less noticeable effect on the backup process speed. For more information see Fine-tuning your backups (p. 77).

The **Notifications** options allow you to enable sending of notifications upon any backup/recovery operation completion either by E-mail or through the Messenger (WinPopup) service. By default all notifications are **disabled**. For more information see Operation results notification (p. 154).

The **Appearance** options allow modifying the appearance of the program's user interface by selecting a font to be used on screens, in dialogs, etc. You can also modify a font to be used in the menu items. To view the appearance of a concrete font, click the "**...**" button, select the font and have a look at the sample text. If you are satisfied with the font's appearance, click **OK**, otherwise try another font or click **Cancel**. In addition, the **Appearance** options let you filter all tasks created on your computer. By default you see only your own tasks, but you have the option to view or manage tasks created by other users. To do so, choose **Filter** and unselect the **Show only tasks created by a current user** box.

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The **Feedback** option allows you to quit the Acronis Customer Experience Program, if you decided to join it during Acronis True Image Home installation or join the program by selecting the **Yes, I want to participate in the program** radio button. If you want to know more about the Customer Experience Program, click the **Learn more** link.

If modifying the default options does not provide the desired results or if you just want to restore the default options values set during Acronis True Image Home installation, click **Reset all to default** on the toolbar. When you need to set the default values only for a selected option, click **Reset the current to default** on the toolbar.

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6. Creating backup archives

6.1. Preparing for your first backup

First of all you should decide where to store your backups. Acronis True Image Home supports quite a lot of storage devices. For more information see Supported storage media (p. 14). Since hard disk drives are now quite inexpensive, in most cases purchasing an external hard drive for storing your backups will be an optimal solution. In addition to enhancing the security of your data – you can keep it off-site (for example, at home if you back up your office computer and vice versa), many models are hot-pluggable, so you can attach and detach the drive as required. You can choose various interfaces – USB 2.0, FireWire, eSATA depending on the configuration of your computer ports and the required data transfer rate. In many cases the best choice will be an external USB 2.0 hard drive, though it has a pitfall – such drive may slow down if it works together with slower USB 1.1 devices. If you have a Gigabit Ethernet home network and a dedicated file server or NAS, for example, Buffalo TeraStation 1.0 TB NAS Gigabit Ethernet Home Server, you can store backups on the file server or NAS practically like onto an internal drive. Blank optical discs such as DVD-R, DVD+R are very cheap, so they will be the lowest cost solution for backing up your data, though the slowest one, especially when backing up directly to DVDs. Furthermore, if your backup consists of several DVDs, data recovery from such backup will require a lot of disc swapping.

Due to the necessity of swapping discs, it is strongly recommended to avoid backing up to DVDs if the number of discs is more than three.

If you decide to use an external hard drive, NAS, etc., you will need to check whether Acronis True Image Home detects the selected backup storage.

Some external hard drives are sold preformatted FAT32. If so, it is better to convert the external hard drive for backups from FAT32 into NTFS, because of the 4GB file size limit of the FAT32 system. Due to this limitation, large backup files will automatically split into 4GB chunks, thus increasing the chance that something will go wrong during data recovery.

If you plan to use an external USB hard drive with your desktop PC, connecting the drive to a rear connector using a short cable will usually provide the most reliable operation, reducing the chance of data transfer errors during backup/recovery.

6.2. Deciding what data to back up

As operating systems and application software become ever larger (for example, Windows Vista x64 requires 15GB of free space on a hard disk), usually it will take you several hours to reinstall your operating system and application software from original CDs or DVDs on a new hard disk. Furthermore, the practice of buying application software by downloading from the Internet is becoming more and more popular. If you lose your registration information, for example, the activation key and/or registration number, which are usually sent by software vendors by e-mail, you may have problems with restoring your right to use the application. So making a backup of your entire system disk (making a disk image) will save you a lot of valuable time in case of a disaster, as well as safeguard you against other possible problems.

Backing up the entire system disk takes more disk space, but enables you to recover the system in minutes in case of a system crash or hardware failure. Moreover, the imaging procedure is much faster than copying files and could speed up the backup process significantly when it comes to

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backing up large volumes of data (for details see The difference between file archives and disk/partition images (p. 19)).

You might think it would take a while to make a copy of your entire hard disk, but the proprietary technologies used in Acronis True Image Home ensure that image creation is quite fast. And the program can also back up incrementally or differentially, so after the first time, updating your image to reflect the current state of your hard disk requires only copying the files that are new or changed and will take much less time. Because images can save you a lot of time when you need to recover the operating system or data, it is recommended that you make them part of your backup strategy.

You should create images of your primary disk and any other partition you normally use. If you have multiple partitions on a drive, it is advisable to include all of them in the image, because failure of the hard drive in most cases will mean that all the partitions it contains also fail.

Although we strongly recommend you to create images of your hard disk on a regular basis, that is just part of a reliable backup strategy.

Do you have bank records, family photos, videos, etc. you accumulated on your computer for several years? Hardware and software can be replaced; your personal data cannot, because it is unique. Though there may be some exceptions, the optimal backup strategy for most users consists of creating both images and file-level backups.

After the initial full backup, file-level backups usually take comparatively little time to run, making it easy to back up your data once (or even several times) a day. This ensures that your most recent backup is never more than a day old. Because they also offer insurance against accidental deletion (or change) and file damage, file-level backups are an essential part of a good backup strategy. But file-level backups alone are not sufficient for two main reasons:

1) If your startup hard drive completely fails, you will not be able to do any work until you've replaced it; and 2) Reinstalling an operating system and applications from their original CDs or DVDs is a lengthy and tedious procedure that you could avoid with an image of your hard disk.

6.3. Some typical backup scenarios

Below are several scenarios of "classic" backups describing frequently used backup tasks. Depending on your backup strategy, you may find some of them useful.

6.3.1. Backing up a system partition

It is recommended to back up the system partition when your C: disk consists of a single partition, though in this case partition backup is equivalent to system disk backup. It is also makes sense to back up the system partition if it contains all your applications and important data or if you do not have enough free space for backing up the entire system disk. A system partition backup would be most helpful when you need to recover the operating system corrupted by a virus, malware or, for example, after Windows update installation. Recovery on a new hard disk drive is possible too, though it may be a bit complicated in case you want to create more than one partition on the new hard disk. Otherwise it is better to back up the entire system disk, especially if it has hidden recovery or diagnostic partitions created by your computer's manufacturer. Furthermore, a system disk backup is more convenient when recovering on a new disk. Backing up the system partition may also be advisable when you like testing a lot of applications or games. Most applications cannot be uninstalled without a trace, including Acronis True Image Home itself. You can make a basic system partition backup containing your operating system and main applications like MS Office and Outlook.

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Thereafter you will always be able to recover that basic system state after trying new programs – if you don't like them or if something goes wrong.

The easiest way of backing up the system partition is using the One-Click Backup either during the first start of Acronis True Image Home after installation or later. This tool is intended for backing up only the system partition and MBR. Of course, you can use the Backup Wizard too, but here is the procedure for using the One-Click Backup tool (not during the first start).

1. If you want to use your external drive for backing up the system partition, attach and power it on before starting Acronis True Image Home.

Choose **Tools & Utilities** → **One-Click Backup** in the main program menu. Acronis True Image Home will offer the destination for storing your backup (if you do not have the Acronis Secure Zone, the destination will be the attached external hard drive). If you would prefer another backup destination, click the link under the Archive location: line and select the storage location most suitable for you.

1. By default the One-Click Backup tool schedules subsequent full backups of your system partition once every seven days, but you can change the interval between backups or cancel scheduling.
2. After you finish settings, click **Protect** to start the backup task.

It is recommended to validate the created backup by running a validation task either manually or on schedule.

The Acronis One-Click Backup tool performs only full backups of the system partition; scheduling an incremental or differential backup is not possible.

For those interested in how One-Click Backup tool selects a destination for backup, here is the algorithm the program uses:

1) First of all the program estimates the space required for operation of the One-Click Backup tool.

2) If you have upgraded from a previous Acronis True Image Home version and already have Acronis Secure Zone, the program will check its size and when the size is sufficient for backup, it will use Acronis Secure Zone. In case the zone is too small for backing up the system partition, the program will move to the next best option.

3) If there is an external hard drive with enough free space, your system partition backups will be stored on that drive, as such backup place will provide better protection for your computer.

4) If the first two options are unavailable but you have at least two internal hard drives, the program will back up to a non-system hard drive using a partition with the maximum free space.

5) If your computer has only one hard drive with several partitions (not counting hidden ones), then the program will use a non-system partition with maximum free space.

6) Finally, if your computer has only one hard drive with a single partition (not counting hidden ones) with enough free space, the program will suggest creating Acronis Secure Zone to use it for backup. If you agree, the program will create the zone and use it for storing the backup.

If you start Acronis One-Click Backup the first time by double-clicking the appropriate shortcut, the program will not suggest creating Acronis Secure Zone.

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6.3.2. Backing up an entire system disk

When your backup storage device has enough free space, it is advisable to back up the entire system disk. Such a backup is most suitable for recovering your system and applications both when you need to recover them on the original hard disk drive or a new one, e.g. after your hard drive failed. Incidentally, if your system disk contains several partitions, an entire disk backup also provides for recovery of any individual partition.

Because system disk backups are the most important for disaster recovery, it is advisable to check both the system disk and the hard disk to be used as the backup storage for errors with the help of Microsoft's Chkdsk utility, which is part of Windows. The utility can repair errors and locate bad sectors.

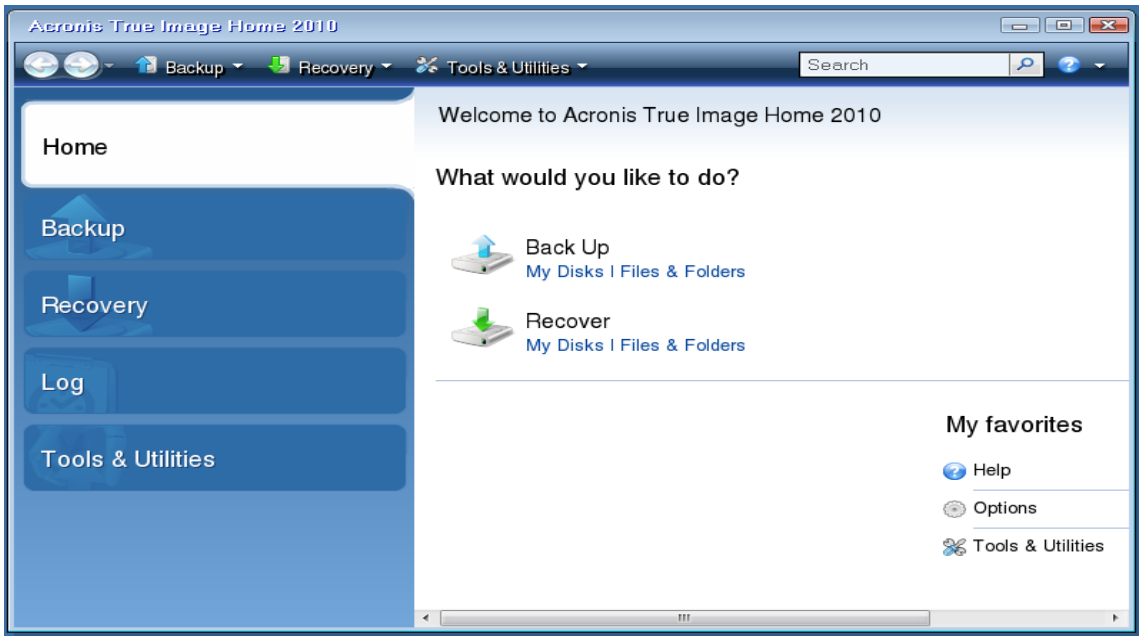
You can back up the system disk both in Windows and in the recovery environment. Before starting a system disk backup in Windows it is advisable to close such applications as MS Outlook and DBMS programs.

Though the program locks the system partition while making a so called "snapshot" (see Acronis True Image Home basic concepts (p. 10)), some users still prefer backing up the system disk when Windows is not running.

The subsequent description is made under the assumption that you boot from your bootable rescue media and the program "sees" all your hard drives and other storage devices in the recovery environment. See Testing bootable rescue media (p. 28).

Attach the external drive if it is to be used for backup storage and make sure that the drive is powered on. This must be done before booting from Acronis rescue media.

1. Arrange the boot sequence in BIOS so as to make your rescue media device (CD, DVD or USB stick) the first boot device. See Arranging boot sequence in BIOS (p. 192).
2. Boot from the rescue media and select Acronis True Image Home (Full version).
3. Click the **My Disks** link under **Back Up** on the Welcome screen.



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4. Select the system disk as the source for backup by checking the appropriate disk box (this will select all partitions on the disk, including the hidden ones).
5. Choose a target archive for the backup being configured – you can either add a new backup to an existing archive or create a new one. Choose the backup location and assign a name to the backup to be created. It is better to use meaningful names, e.g. Disk1_full.tib.
6. Carefully read the Summary of actions to be performed during backup and click **Proceed** if you are satisfied with the backup task settings, otherwise click **Options** on the Summary screen to change the settings.
7. Select a backup method. For a more detailed explanation of the methods see Full, incremental and differential backups (p. 19). When performing backups in the recovery environment many users prefer full backups, though you may choose another method depending on your needs.
8. Set the backup options. When backing up in the recovery environment you must set the options manually for each backup task. You can encrypt the backup for data protection and select a compression level (the program shows estimated backup sizes for each level). You can also choose to validate the backup immediately after its creation (under "Additional settings"), though it can be done later. In any case validation of a system disk backup is best performed in the recovery environment, as you will use the recovery environment when recovering the system partition or disk.
9. If you wish, provide comments to the backup. You will also be able to add comments later.
10. Click **Proceed** to start the backup.

It is extremely important to validate the system disk backup before trying to recover, because Acronis True Image Home deletes the original partition(s) on the disk before starting recovery and if it finds a problem with the backup file during recovery, you are left with nothing. It is even better to try system disk recovery to a spare hard drive, if you have one.

6.3.3. Backing up a data partition or disk

Your personal data (MS Office documents, financial documents, pictures, music, videos, etc.) require protection in no less degree than your operating system. Such data is better kept separately from your operating system and applications on a dedicated partition or disk. This speeds up data partition or disk image backup, as well as recovery. It is recommended to perform data disk backup in Windows, because in most cases Windows drivers for storage devices operate better and faster than the respective Linux drivers used in the recovery environment. In addition, recovery of data disks and partitions usually occurs in Windows. Let's create a data disk backup task in Windows.

Attach the external drive if it is to be used as the backup destination and make sure that the drive is powered on. This must be done before starting Acronis True Image Home.

1. Click the **My Disks** link under **Back Up** on the Welcome screen.
2. Select the box of your data partition or disk on the **What to back up** screen.
3. Choose a target archive for the backup task being configured – you can either add a new backup to an existing archive or create a new one. Choose the backup location and assign a name to the backup to be created. It is better to use meaningful names, e.g. Data_disk.tib. When you store different backup archives in the same location, e.g. on an external drive, you may want to create a new folder when creating a new backup archive. To do this, click **Create new folder** in the toolbar, then assign a meaningful name to the folder.

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4. Carefully read the Summary of actions to be performed during backup and click **Proceed** if you are satisfied with the backup task settings, otherwise click **Options** on the Summary screen to change the settings.
5. The first optional step offers to schedule the backup task. Scheduling together with a backup method and automatic consolidation rules allows implementing a desired backup strategy. For more information see Examples of backup scheduling scenarios (p. 117).
6. Choose a backup method. For a more detailed explanation of the methods see Full, incremental and differential backups (p. 19). Let's reiterate that selection of the backup method may depend on the desired backup strategy.
7. At the next step you may exclude certain files and folders from backup. For example, you transferred some movies from your DVDs to the data disk. They occupy quite a lot of space and it doesn't make sense to back them up because you have the DVDs.
8. Set the options for the backup task being created. For example, when your data disk contains sensitive information, you may want to protect the information by encryption. You can also choose to validate the backup right immediately after its creation (under "Additional settings"), though it can be done later.
9. Set the automatic consolidation rules when required by the chosen automatic backup archive management strategy. For more information see Setting automatic consolidation (p. 75).
10. If you wish, provide comments to the backup. You will also be able to add comments later.
11. Click **Proceed** when you are satisfied with the backup task settings.

If you have not included validation into the backup task settings, it is strongly recommended to validate the backup later – by performing the validation task either manually or on schedule. You should get into the habit of validating your backups.

6.3.4. Backing up files/folders

Though image backups of a data disk/partition contain all files and folders, there may be cases when backing up an entire partition isn't efficient. Suppose you are working on an urgent project and make changes only in the related files. Backing up the entire data partition with the project files will require much more time and disk space, so backing up just the project files will be a more efficient solution. For such situations Acronis True Image Home provides the My Data backup type.

Attach the external drive if it is to be used as the backup destination and make sure that the drive is powered on. This must be done before starting Acronis True Image Home.

1. Start Acronis True Image Home and click the **Files & Folders** link under **Back Up** on the Welcome screen.
2. Set a checkmark in the box of your project files folder (e.g. Myproject) on the **What to back up** screen. The right side of the **Files to back up** pane will show the folder contents with all the selected files and subfolders. There you can unselect the files you do not need to back up, if any.
3. Choose a target archive for the backup task being configured – in this case create a new one. Choose the backup archive location and assign a name to the backup to be created. It is better to use meaningful names, e.g. Project.tib. When you store different backup archives in the same location, e.g. on an external drive, you may want to create a new folder when creating a new backup archive. To do this, click **Create new folder** on the toolbar, then assign a meaningful name to the folder.

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4. As your project will take several days, it is reasonable to back up the project files at least once a day by setting an appropriate schedule, so click **Options** at the Summary step to be able to create a schedule.
5. Select the **Daily** scheduling option. If you think that your work results will be safer being backed up more often, select **Run the task every x hour(s) until the end of the day** box and specify the interval in hours. Your files can be open when backups are running, though it might be advisable to close them when working with a database.
6. Choose a backup method. If you would like to save several versions of your project files, select the **Incremental** method. Thus Acronis True Image Home will at first create a full backup, then will supplement it with incremental backups till the project is finished. After finishing the project you will be able to either delete the task or disable it until you need to run the task again.
7. The next step allows you to exclude from the backup temporary files created, e.g. by Microsoft Word by providing appropriate criteria.
8. When the project files contain sensitive information, the backup options allow protecting your backups with a password and encryption. In addition, you can set validation of backups immediately after creation – this makes sense in case of frequent backups as it relieves you of remembering to validate them later.
9. The next step allows setting automatic consolidation of the backup archive, for example, when the "age" of backups exceeds the desired time period (30 days by default).
10. If you wish, provide comments to the backup. You will also be able to add comments later.
11. Click **Proceed** when you are satisfied with the backup task settings.

6.3.5. Backing up to a network share

With Acronis True Image Home you can back up your data to a network share. This may be desirable, for example, when you have a file server and want to use it for backing up data from PCs in your home network. Depending on your backup strategy, you may want to back up just files and folders or entire disks. One more consideration is the data transfer rate provided by your network. For example, a Gigabit Ethernet network has a bandwidth sufficient for all amounts of data to be backed up. However backing up over Wi-Fi connection may be time-consuming when you need to back up a hundred gigabytes.

Files and folders or data partitions can be backed up and recovered in Windows. If you plan to back up your system disk or partition, please, make sure that the standalone version of Acronis True Image Home can "see" the network share to be used for backups as system recovery will be done in the recovery environment. After booting from the rescue media make sure that you can browse to the share in the Backup wizard or Recovery wizard.

It may be advisable to first back up and recover some files to ensure that you can perform those operations over the network. In addition, it is not recommended to map the drive containing the network share. Specifying the UNC path makes it easier to establish network connection in most cases.

Let's suppose you want to back up your system partition.

1. Start Acronis True Image Home and click the **My Disks** link under **Back Up** on the Welcome screen.
2. Select the check box of your system partition on the **Source selection** screen.

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3. When you are connecting to a networked computer, in most cases you will need to provide the network credentials (user name and password) to access a network share. To do this, select the **Use NT authentication** box and enter the user name and password into the appropriate fields. Pressing the **Test authentication and connection** button allows testing the ability of the computer to connect to the selected network share. If testing results in an error message, check whether you provided the correct credentials and enter the right credentials for the network share. When the **Use NT authentication** box is left unselected, the computer will try to log on to the share with the credentials used for logging on to Windows. Having provided the required information, click **OK** to continue. Choose a target archive for the backup task being configured – you can either add a new backup to an existing archive or create a new one. It is better to use meaningful names, e.g. Disk_C.tib.
4. Carefully read the Summary of actions to be performed during backup and click **Proceed** if you are satisfied with the backup task settings, otherwise click **Options** on the Summary screen to change the settings.
5. The first optional step offers to schedule the backup task. Scheduling together with a backup method and automatic consolidation rules allows implementing a desired backup strategy. For more information see Examples of backup scheduling scenarios (p. 117).
6. Choose a backup method. For a more detailed explanation of the methods see Full, incremental and differential backups (p. 19). Let's reiterate that selection of the backup method may depend on the desired backup strategy.
7. At the next step you may exclude certain files and folders from backup, e.g. temporary ones.
8. Set the options for the backup task being created. You can choose to validate the backup immediately after its creation, though it can be done later.
9. Set the automatic consolidation rules when required by the chosen automatic backup archive management strategy. For more information see Setting automatic consolidation (p. 75).
10. If you wish, provide comments to the backup. You will also be able to add comments later.
11. Click **Proceed** when you are satisfied with the backup task settings.

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7. Acronis Nonstop Backup

7.1. What is Acronis Nonstop Backup

Acronis Nonstop Backup is a new Acronis True Image Home feature that provides convenient protection of your disks and files, and allows you to recover from disaster both entire disks and individual files and even their versions. By default Acronis Nonstop Backup will protect your system partition, though you can select other partitions and disks to be protected too. Acronis True Image Home will recommend you the disk (or partition) it considers the best location for storing the backup data. The storage selection algorithm is similar to that used by the One-Click Backup feature, though the Acronis Secure Zone cannot be used as the storage for Acronis Nonstop Backup.

Once you start Acronis Nonstop Backup, it will perform an initial image backup of the partition(s) selected for protection. Having finished this task, Acronis Nonstop Backup will then save changes in your system and files (including open ones) every five minutes, so you will be able to recover your system to an exact state in time.

States of the protected partitions will be backed up at 5-minute intervals for the last 24 hours. The older backups will be consolidated in such a way that Acronis True Image Home will keep daily backups for the last 30 days and weekly backups until all Nonstop Backup storage space is used.

The consolidation will be performed every day between midnight and 01:00 AM. The first consolidation will take place after the Nonstop Backup works not less than 24 hours. For example, you have turned on the Nonstop Backup at 10:00 AM on September 12. In this case the first consolidation will be performed between 00:00 and 01:00 AM on September 14. Then the program will consolidate the data every day at the same time. If your computer is turned off between 00:00 and 01:00 AM, the consolidation will start when you turn the computer on. If you turn off the Nonstop Backup for some time, the consolidation will start after you turn it on again.

You may think that at these backup rates the storage will fill in no time. Do not worry as Acronis True Image Home will back up only so called "deltas". This means backing up not entire changed files, but only differences between new and old versions. For example, if you use Microsoft Outlook or Windows Mail, your pst file may be very large. Furthermore, it changes with each received or sent E-mail message. Backing up the entire pst file after each change would be a big waste for your storage space, so Acronis backs up only its changed parts in addition to the initially backed up file.

The program checks partitions and files for changes every five minutes and creates a new time "slice" only when it finds changes, so the intervals between "slices" can be more than five minutes. In addition, if, for instance, you are working in Word and do not use the "Save" operation for an hour, changes in the Word document will not be backed up every five minutes, because the program checks file changes on the disk and not in the memory.

7.2. Enabling and setting up Acronis Nonstop Backup

You can make settings for Nonstop Backup and enable Nonstop Backup by selecting **Backup** → **Nonstop Backup** on the sidebar and clicking the Nonstop Backup icon on the Acronis Nonstop Backup screen. By default Acronis True Image Home selects your system partition for Nonstop Backup and offers a storage it considers optimal for keeping Nonstop Backup data. Click **OK** in the Nonstop Backup options window to accept the default settings or change them according to your preferences.

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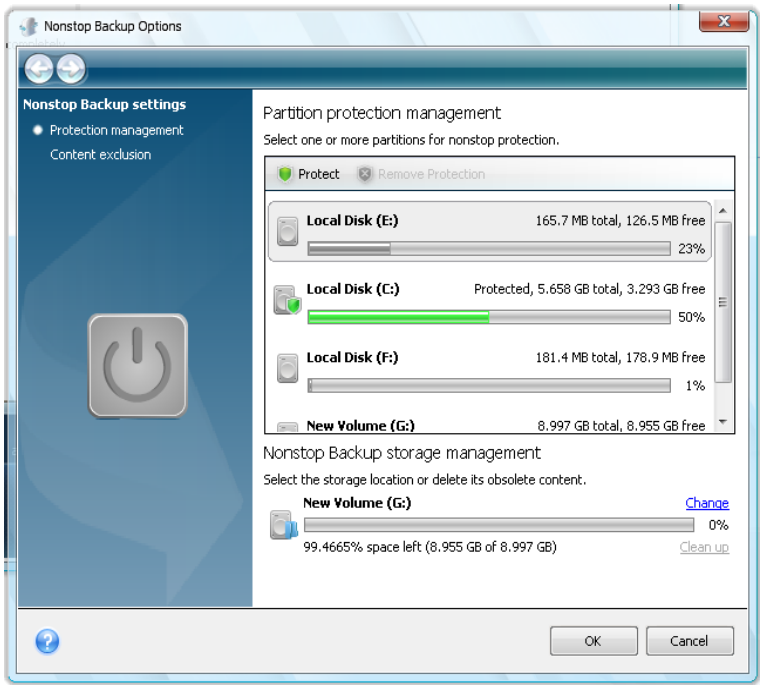
Changing Acronis Nonstop Backup settings

The Acronis Nonstop Backup options window allows you to change the settings of Acronis Nonstop Backup.



- **Protection management** - select the partitions on your computer to be protected by Nonstop Backup. To add a partition, select it on the right pane and click **Protect** on the toolbar. To remove a partition from protected ones, select it and click **Remove protection** on the toolbar.
- **Content exclusion** - select the files and folders to be excluded from protection by Acronis Nonstop Backup. By default, the program excludes files pagefile.sys and hiberfil.sys on the system partition, as well as the default folders Windows uses for temporary files. You can exclude other files and folders by specifying a path to them (click **Add path** on the toolbar and type the path) or creating masks for exclusion using the common Windows wildcard characters (click **Add mask** and specify a mask. For instance, to exclude all files with .bmp extension, type ***.bmp**.) You can also exclude files and folders by selecting them in Windows Explorer and choosing **Storages** → **Exclude from Nonstop Backup** in the shortcut menu that opens by right-clicking on the selected file or folder.

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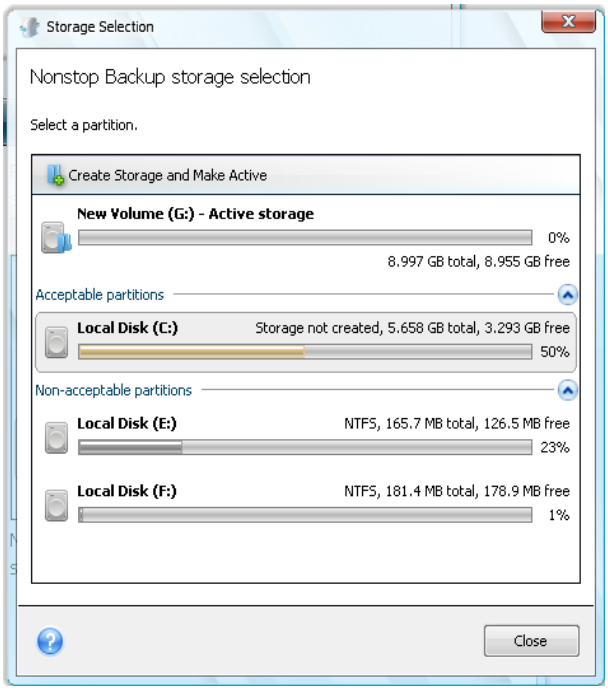
To change the default Nonstop Backup storage click the **Change** link located to the right of the current storage line, then select a new storage among acceptable ones and click **Create Storage and Make Active** on the toolbar of the Nonstop Backup storage selection window.



Having finished the settings click **OK** and Acronis Nonstop Backup will start protection with the new settings.

Acronis Nonstop Backup remains enabled after restarting Windows and even after switching the computer off.

7.3. Using Acronis Nonstop Backup

Using Acronis Nonstop Backup is easy. After you start Nonstop Backup the program automatically creates the initial image of the partitions you have selected for protection, and thereafter continues to back up changes on those partitions until the Nonstop Backup Storage has free space.

Be aware that when all free space is used, Acronis Nonstop Backup does not delete the oldest data automatically, but simply stops working and notifies you by displaying a balloon message in the Windows taskbar notification area. In this case you will need either to clean up the obsolete data manually to free up some space or select another location for Nonstop Backup Storage.

If you select a new location for storage, Acronis Nonstop Backup will create there a new initial image of the partitions selected for protection, and then will operate like it has done with the previous storage.

If you select a new storage while the old one is not yet filled up, you will be able to continue using the old storage after some time. This may be useful when your old storage is an external hard disk drive. You can disconnect it for a while, e.g. for safekeeping at a friend's house. When you decide to use the storage again, attach the drive, select it on the Nonstop Backup storage selection window and make it the active storage.

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After you activate the old storage, Acronis Nonstop Backup will consolidate the old backups according to the algorithm it uses for consolidating backups and will then start to back up changes on the selected partitions again.

When the need arises to recover some data, your actions will differ depending on what you want to recover - partitions or files/folders.

A partition is recovered using the Recovery Wizard. If you need to recover a data partition, it is easier to do in Windows. Recovery of the system partition is better to perform after booting from the rescue media. For more information see Recovering partitions protected with Acronis Nonstop Backup (p. 50). The Recovery Wizard allows you to recover files and folders as well, though in many cases it is more convenient to recover files using Acronis Time Explorer. For more information see Recovering files protected with Acronis Nonstop Backup (p. 51).

7.4. Recovering partitions protected with Acronis Nonstop Backup

You can recover partitions from Acronis Nonstop Backup Storage using the Recovery Wizard. Let's first recover a data partition in Windows.

1. Start Acronis True Image Home.
2. Choose **Recovery** on the sidebar, then click the **Disk backups** tab on the right pane. Select the backup archive from which you want to recover files at the Nonstop Backup Storages area. Right-click on the backup and choose **Recover** in the shortcut menu to start the Recovery Wizard.
3. Select **Recover whole disks and partitions** on the Recovery method screen.
4. At the next step select the point in time at which the partition(s) to be recovered was in the desired state. You can select a point in time for the files that changed within the last 24 hours and a date for older backups. For backups that were made more than 30 days ago the program will keep weekly backups highlighting the dates for which backed up data is kept. Having selected the recovery point click **Next**.
5. The next steps of the Recovery Wizard are similar to those performed when recovering data partitions or disks from a "classic" backup. For more information see Recovering a data partition or disk (p. 90).

Depending on circumstances, recovery of the system partition may be performed both in Windows and after booting from your rescue media (when Windows does not start). Recovery in Windows is similar to recovery of a data partition, though it will require reboot. By the way, usually it is safer to recover the system partition using the rescue media.

When using the rescue media, the recovery procedure is very similar to the procedure used for recovering the system partition from a "classic" backup, except the Recovery point step that allows selecting the point in time to which you recover the system partition. For more information see Recovering your system partition (p. 85).

*If you use as a Nonstop Backup Storage an external USB hard drive and after booting from the rescue media the Disk backups tab does not show backups on that external hard drive in the Nonstop Backup Storages area, click the **Refresh backups** button to find them.*

Acronis True Image Home safe version does not support recovery from Nonstop Backup Storages.

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7.5. Recovering files protected with Acronis Nonstop Backup

You can recover files from Acronis Nonstop Backup Storage using both the Recovery Wizard and Acronis Time Explorer.

Recovering files using the Recovery Wizard

1. Choose **Recovery** on the sidebar, then click the **Disk backups** tab on the right pane.
2. Select the backup archive from which you want to recover files at the Nonstop Backup Storages area. Right-click on the backup and choose **Recover** in the shortcut menu to start the Recovery Wizard.
3. Select **Recover chosen files and folders** on the Recovery method screen.
4. At the next step select the point in time at which the files and folders to be recovered were in desired states. You can select a point in time for the files that changed within the last 24 hours and a date for older backups. For backups that were made more than 30 days ago the program will keep weekly backups and will highlight the dates for which backed up data is kept. Having selected the recovery point click **Next**.
5. The next steps of the Recovery Wizard are similar to those performed when recovering files and folders from a "classic" backup. For more information see Recovering files and folders from image archives (p. 92).

Recovering files using Acronis Time Explorer

Time Explorer provides more flexibility when you need to recover just a few files. It allows you to view the number of versions of a file kept on the storage, select a specific version, open this version in the associated application to make sure that the version contains the data you need and recover just that version.

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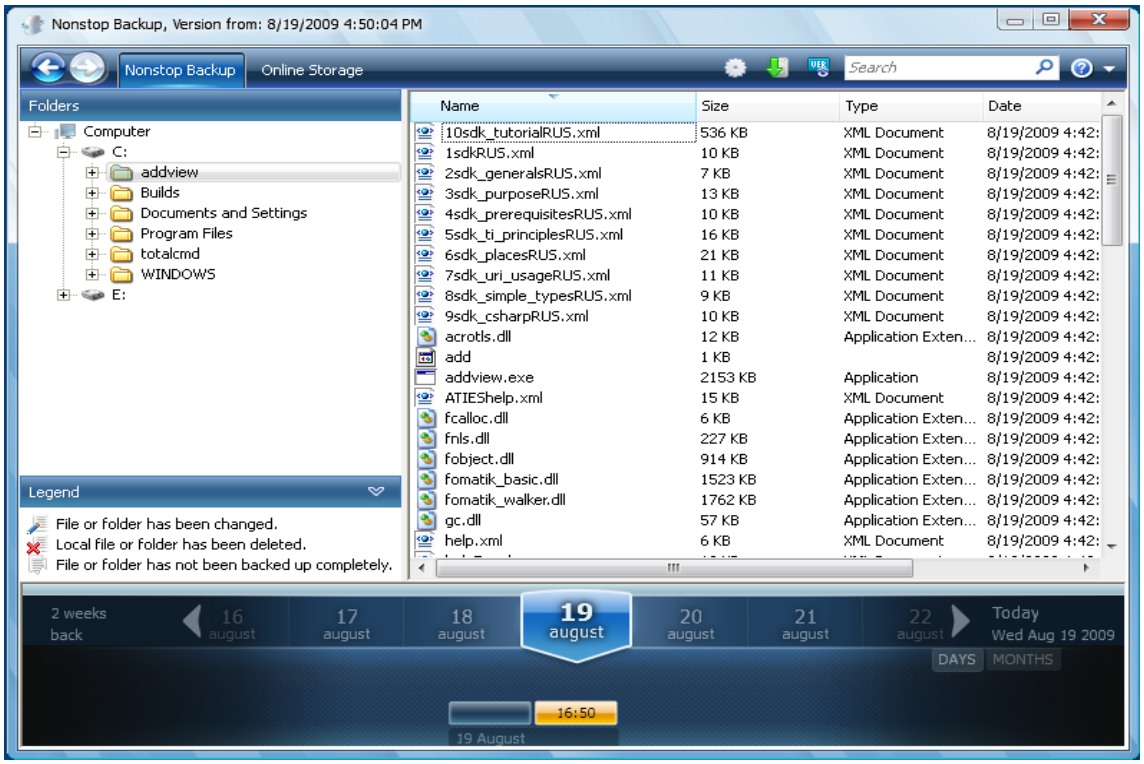
1. Choose **Recovery** on the sidebar, then click **Recover data from nonstop backup** on the right pane to open Acronis Time Explorer.



2. Select the partition and then the folder that contains the files you want to recover on the directory tree in the left pane. The right pane lists the files in that folder. Select the files to recover. When selecting multiple files you can use the **Ctrl** and **Shift** keys like in Windows Explorer. Having finished selection, right-click on the selected files and choose **Recover** in the shortcut menu.

3. Acronis True Image Home opens the **Browse for folder** dialog. By default the original location from which the files were backed up will be selected. If necessary, you can select another folder or create a new folder for the files to be recovered to by clicking the **Make New Folder** button. After selecting the folder click **OK** to proceed with recovery.

If you recover the files to the original folder and Acronis True Image Home finds a file there with the same name, it will open a dialog window where you can choose what to do with the files: **Recover and replace** the file on the disk, **Do not recover** (to keep the file on the disk), and **Recover, but keep both files** (the recovered file will be renamed). If you want to use the choice for all files with identical names, select the **Apply to all files** check box.

*It is impossible to **Recover and replace** files on the disk which are being used or locked by the operating system at the moment of recovery.*

If you need to recover a specific version of a file, select the file either in Time Explorer or in Windows Explorer, right-click and choose **View Versions** in the shortcut menu. This opens the **File Versions** window. Select the required version by its backup time and click **Recover** on the toolbar. To choose the right version, you can open the version in the associated application and view the file contents. Select the file in the right pane and the backup times for all its versions kept on the Nonstop Backup Storage will be shown in the bottom line of Time Explorer. Choose a version by its backup time, then right-click on the file in the right pane and choose **Open** in the shortcut menu. Acronis True Image Home will recover the file version to a temporary folder and then will open the file using the associated application.

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7.6. Managing Acronis Nonstop Backup storage

Inevitably the Acronis Nonstop Backup Storage becomes full after a period of time which depends on the selected Nonstop Backup storage and the number and composition of partitions protected by Acronis Nonstop Backup.

When your selected Acronis Nonstop Backup storage fills up, you can choose another storage without losing the previously backed up data.

One more way of managing the Acronis Nonstop Backup storage is cleaning up the data you do not need anymore. To clean up the storage, select **Backup** → **Nonstop Backup** on the sidebar and then click the link to the active Nonstop Backup storage in the right pane. This will open the Nonstop Backup Options window. To clean up the active Nonstop Backup storage, click the **Clean up** link.

Acronis True Image Home displays a window allowing you to select a period of time for deleting the backups created during that period. Select the required period and click **OK**.

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8. Online backup

Acronis Online Backup might be unavailable in your region. To find more information, click here.

The main reason for using Acronis Online Backup is that you will be able to keep your data secure by storing off-site. Because your files are stored elsewhere, they are protected even if your computer gets stolen or your house burns down. So the risk of data loss as a result of theft, fire, or other natural disasters is practically eliminated. Online backup is basically a method of off-site data storage whereby files and folders are regularly backed up on a remote storage. As a result, you can safely recover any corrupted, lost or deleted files on your computer.

Of course, online backup is not without its shortcomings. If there is a problem with your Internet connection, you could be left without access to your data for some time. And you won't be able to boot up your computer from an online backup, so it is advisable to supplement online backup with image backups to local hard disks.

The biggest drawback of online backup is speed. Even through a fast broadband connection, backing up your data online will be much slower than backing up to a local hard drive. Depending on the amount of data you want to store off-site, your first full online backup could last several hours, though subsequent backups will take much less time, as you'll be backing up only new or changed files.

If you decide to use encryption, the files will be encrypted before transmission over the Internet and data will be stored on the Acronis Online Storage in encrypted form, so you can rest assured that your private information is secure.

8.1. Creating an Online backup account

Performing backups to Acronis Online Storage requires subscription to the Online Backup service. Select **Back Up** → **Online Backup** in the main program menu and then click the **Subscribe to Online Backup service** link on the Online Backup Login window. This will open your web browser and take you to the main Acronis Web site to continue registration.

If you already have an Acronis account, type the e-mail address and password for that account under "Log in to Your Account" to the right. You will be taken to your account page where you will be able to subscribe to the Online Backup Service.

If you do not have an Acronis account, fill in the appropriate fields, and the account will be created for you. Provide your first and last names and e-mail address. You will be offered a country selected on the basis of the IP address of your computer, though you can select another country, if you wish.

Then provide a password for your new account and confirm the password by retyping it once more in the appropriate field. When you perform all actions necessary for account registration, please, wait for an e-mail message describing the details of your subscription plan and expiration date. Now you can perform your first online backup.

To keep your personal data secure, choose a strong password for your online backups, guard it from getting into the wrong hands, and change it from time to time.

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8.2. Recommendations on selecting data for storing online

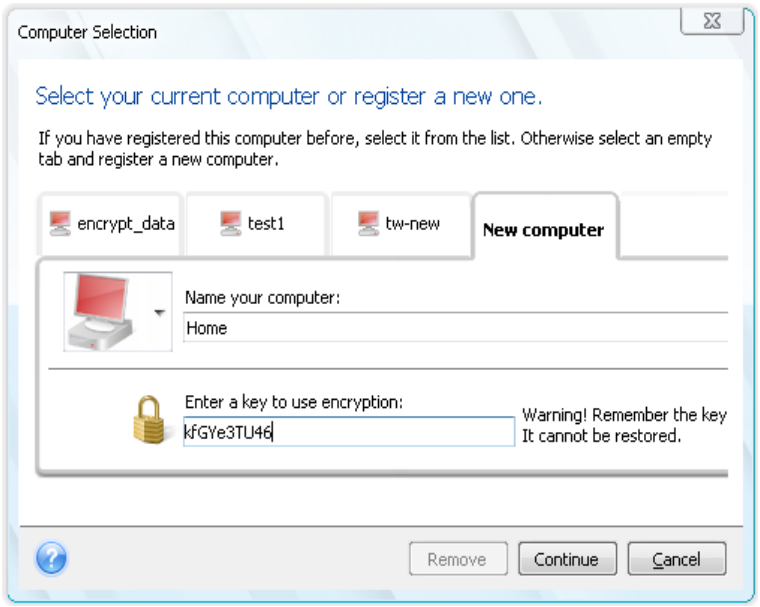
Because online backups are relatively slow, you should think over what data to back up. First of all consider backing up your personal data that cannot be recovered if lost as a result of fire, computer theft, etc. Before proceeding with a backup, estimate how long it will take to back up your data. For instance, if your folders take up 10GB and your upload speed is 1000 Kbps (somewhat less than half a gigabyte per hour), it should take more than 20 hours to perform your first full backup. So depending on the speed of your Internet connection, you may want to back up just the most critical files.

8.3. Backing up to Acronis Online Storage

To perform an online backup, log on to your Online Backup service account by clicking **Backup** → **Online Backup** on the sidebar and entering your e-mail address used for opening the account and the password. In order to not enter the password during subsequent logons, you may want to select the **Remember the password** check box. Make these settings and click **Log In**.

After the program connects to Acronis Online Backup Server, select a computer for connection to the Online Storage. When logged on to the online backup service for the first time, register a computer for work with Online Backup. To do this, click **New computer**, then type in the computer name.

If you want to use encryption for the data to be stored on the Online Storage, enter an encryption key to be used for encrypting your data. Entering the encryption key automatically enables encryption of all data stored on the Online Storage. The encryption key is similar to a password, but it is used for unlocking access to your encrypted data. Acronis Online Backup uses the industry-standard AES-256 encryption algorithm. The data will be encrypted before transferring through the Internet to the Online Storage and will be stored in encrypted form. You need to enter the encryption key for the computer only once during its registration, though it will be required if you try to recover files backed up from this computer when connected to the Online Storage from another computer. Having made all the necessary settings, click **Continue**.



Until you log off, subsequent connections to the Online Storage from this computer will occur automatically - you just need to select **Online Backup**.

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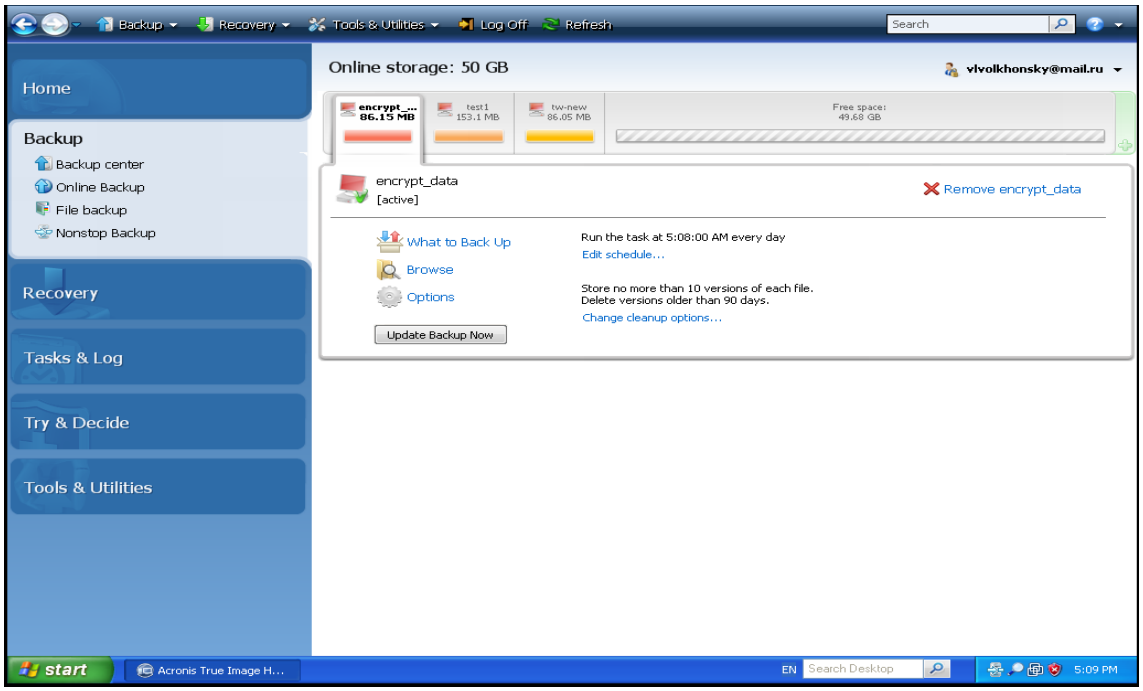
If you already registered the computer, select it from the list of registered computers, then click **Continue**. By default your current computer is selected for registration.

When the computer connects to the online storage, the **Online storage** screen with your storage space quota appears.



If you have performed backup on this computer before, you will see how much Online storage space is occupied by the backed up files and folders. The screen also shows the space occupied by the data backed up from other computers (if any) and the remaining free space on the Online storage in accordance with your quota.

When you are going to back up from the current computer for the first time (or need to change the files and folders selected for online backup), click **What to Back Up**. This will open the What to Back Up window with two tabs: **Include** and **Exclude**.

The **Include** tab displays your computer's file and folder tree. The area to the right of the tree shows the contents of a selected folder. This tab allows you to select individual files and folders for backing up, as well as data categories. For more information on categories see Selecting what data to back up (p. 68). Furthermore, you can create a custom category by clicking **Add new category**. For more information see Creating a custom data category for backups (p. 84). Select the files and folders that need to be backed up.

The **Exclude** tab enables hidden and system files and folders to be excluded from online backup, as well as files meeting the criteria you specify. Excluding unnecessary files may be useful for backups to the Online storage as the data transfer rate and available space are limited.

*You can also exclude/include files and folders by selecting them in Windows Explorer and choosing **Storages** → **Exclude from Online Backup** (or **Include in Online Backup**) in the shortcut menu that opens by right-clicking on the selected file or folder. This shortcut is only available when you are logged on to the Online Backup service.*

Having finished selecting files and folders for backing up to the Online storage and for excluding from backup click **OK**. If you do not unselect the **Run the updated online backup task now** check box that

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is selected by default, the online backup task will start immediately. Otherwise it will run according to the schedule you set.

To schedule online backups, click the **Edit schedule...** link. For instance, you may want the backups to be performed at night in order to not interfere with your web surfing. For more information see Scheduling tasks (p. 111). When you finish scheduling and click **OK**, the schedule information will be shown above the **Edit schedule...** link.

By default Acronis True Image Home schedules daily backups to the Online Storage with randomly selected backup start time.

You can quickly start updating the files and folders backed up on the Online storage without creating a backup schedule. To do so, click **Update Backup Now**. This may be useful when you want to back up immediately some important changes to the files backed up on the Online Storage. Incidentally, if the last scheduled online backup has failed, this link changes to **Update Backup Now (Last backup failed)**, allowing you to repeat the failed backup task right away. If you have suspended the previous online backup for any reason, the link text will be as follows: **Update Backup Now (Last backup suspended)**.

8.4. Recovering data from Online Storage

Log on to your online backup account by clicking **Backup** → **Online Backup** on the sidebar and entering your e-mail address used for opening the account and the password. After the program connects to Acronis Online Backup Server, select a computer for registration on the Online Storage. By default your current computer is selected for registration. Click the **Continue** button. The Online storage screen opens with this computer selected. If you have data backed up from more than one computer, you can select on this screen the computer from which to recover required files. Naturally, you can only browse and recover the data backed up from other computers.

If you encrypted data on another computer, you will be asked to enter the encryption key for the computer to get access to its data on the Online Storage.

1. Click **Browse** on the **Online storage** screen.

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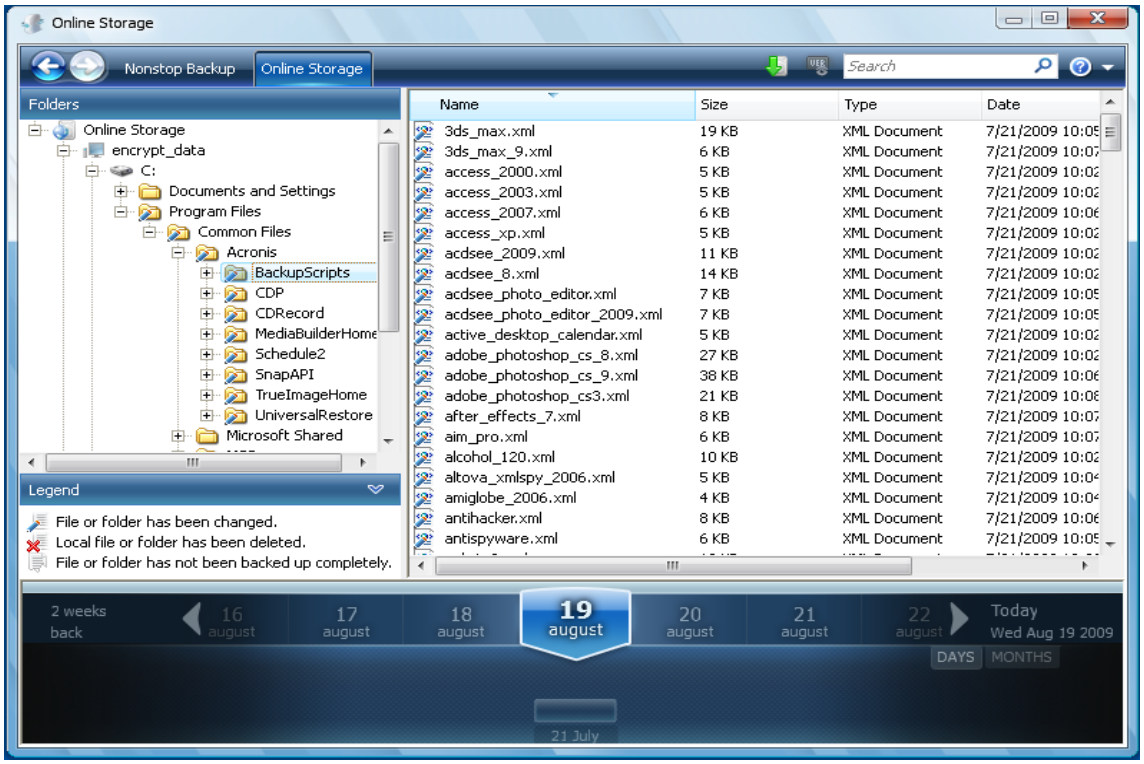
Acronis Time Explorer will be opened with the **Online Storage** tab selected.



2. This window also allows choosing the computer from which you backed up the files and folders you need to recover. Select the computer by its name on the directory tree under Online Storage in the left pane.
3. By default the state of the Online Storage after the latest backup is displayed, so the latest versions of the files and folders will be recovered. If you need to recover earlier versions, select the date and time on which you want to recover the state of the files and folders.
4. Select the folder containing the files you want to recover in the left pane. The right pane lists the files in that folder. Select the files to recover. When selecting multiple files you can use the **Ctrl** and **Shift** keys like in Windows Explorer. Having finished selection, click the **Recover** icon on the toolbar.
5. Acronis True Image Home opens the **Browse for folder** dialog. By default the original location from which the files were backed up will be selected. If necessary, you can select another folder or create a new folder for the files to be recovered to by clicking the **Make New Folder** button. After selecting the folder click **OK**.

If you recover the files to the original folder and Acronis True Image Home finds a file with the same name there, it will open a dialog window where you can choose what to do with the file: **Recover and replace** the file on the disk, **Do not recover** (to keep the file on the disk), and **Recover, but keep both files** (the recovered file will be renamed). If you want to use the choice for all files with identical names, select the **Apply to all files** check box.

*It is impossible to **Recover and replace** files on the disk which are being used or locked by the operating system at the moment of recovery.*

If you need to recover a specific version of a file, select the file, right click and choose **View Versions** in the shortcut menu. This opens the **File Versions** window. Select the required version by its backup time and click **Recover** on the toolbar. To choose the correct version, you can open the version in the associated application and view the file contents. Select the file in the right pane and the bottom line

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of Time Explorer will show the times of backing up all its versions kept on the Online Storage. Choose a version by its backup time, then right-click on the file in the right pane and choose **Open** in the shortcut menu. Acronis True Image Home will recover the file version to a temporary folder and then will open the file using the associated application.

8.5. Managing Online Storage

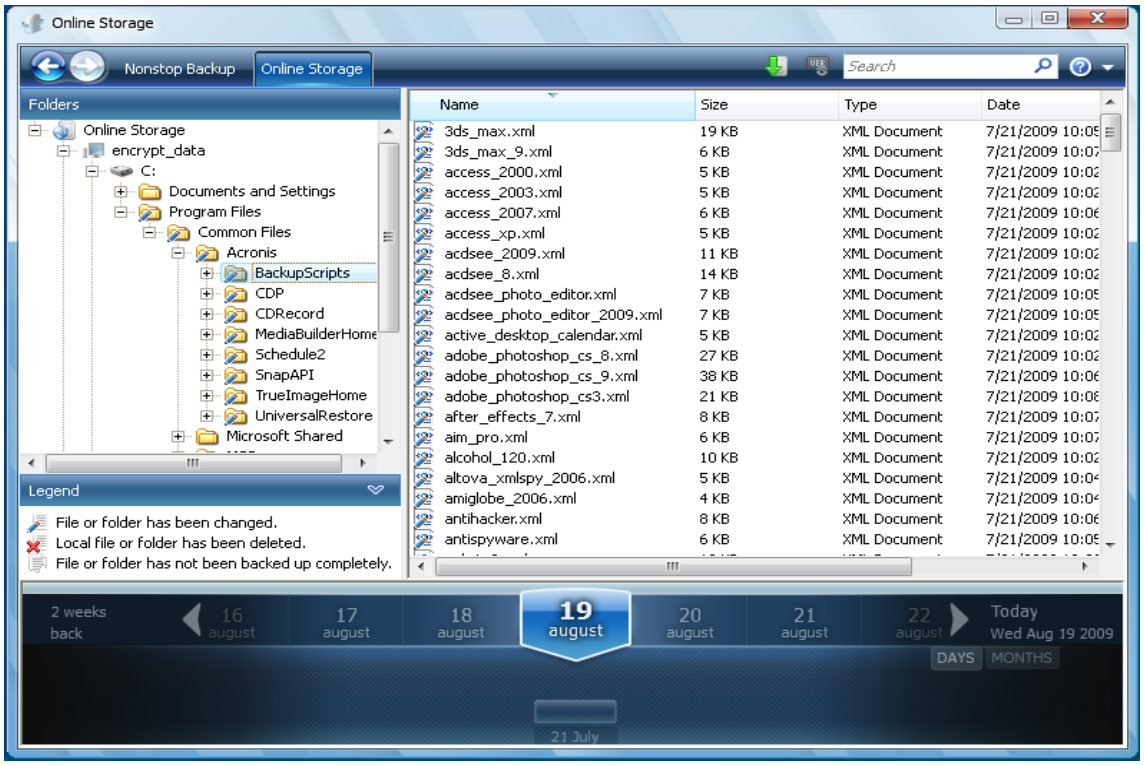
As the available space on Acronis Online Storage is limited depending on the chosen backup plan, you need to manage your Online Storage space by cleaning up the obsolete data. Cleanup can be done in a variety of ways. The most "drastic" one is removing a computer registered on the Online Storage, if you have registered more than one. Removing a computer results in deleting all data that was backed up from that computer, so such an operation must be carried out with caution. To remove a computer, select it on the **Online storage** screen by its name and click **Remove <Computer_name>**, then click **Yes** in the confirmation window. After the deletion finishes, click **Refresh** on the toolbar to refresh the storage state shown.

The Online backup options provide for automatic cleanup of the Online Storage. You can specify deletion of files that have been kept on the storage longer than the specified number of months or days. In addition, you can set the maximum number of file versions to be kept on the Online Storage. You can accept the default settings for those options shown above the **Change cleanup options...** link or set the values you need. To change the above options, click the link and set the desired values.

You can also manage Acronis Online Storage by deleting individual files or even some of their versions.

1. Click **Browse** on the **Online storage** screen.

   Acronis Time Explorer will be opened with the **Online Storage** tab selected.



2. Select the computer from which you backed up the files you need to manage by its name on the directory tree under Online Storage in the left pane.

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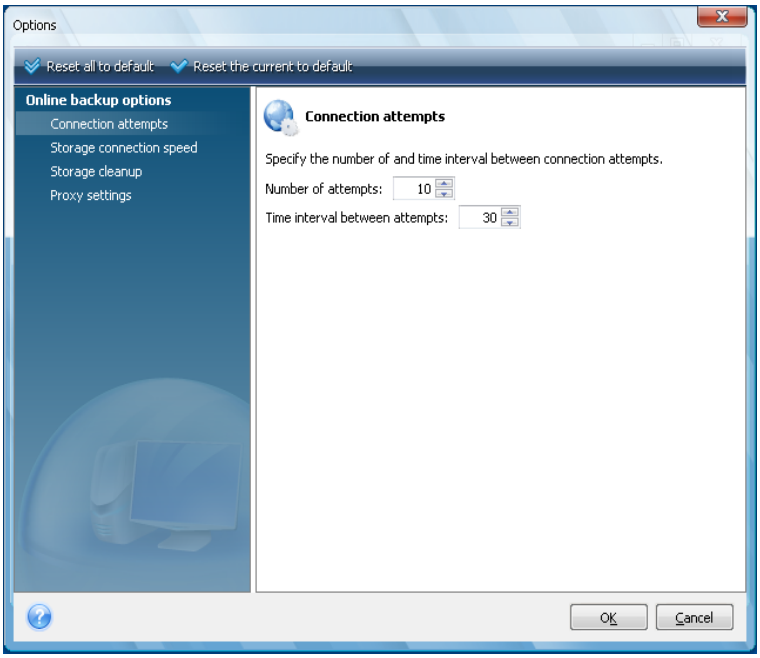
3. Select the folder containing the files you want to manage in the left pane. The right pane lists the files in that folder.
4. If you want to delete some versions of a specific file, select the file and click **View Versions** on the toolbar. This opens the **File Versions** window. Select the version you want to delete and click **Remove** on the toolbar. When you want to delete several versions, use the **Ctrl** and **Shift** keys like in Windows Explorer to select the versions for deletion and then click **Remove** on the toolbar. Having finished removing the versions, click **OK**. To delete all versions of the file click **Remove All** on the toolbar.
5. If you want to delete a file, select it in the right pane. When selecting multiple files for deletion you can use the **Ctrl** and **Shift** keys like in Windows Explorer. Having finished selection, right-click on the selection and choose **Delete** in the shortcut menu.
6. After you finish managing the Online Storage, close the Acronis Time Explorer window.
7. To see how much space you have freed up, click **Refresh** on the toolbar of the Storage state screen and check the new value of free space.

8.6. Setting online backup options

You can set these options after logging on Acronis Online Backup and selecting a computer for use with Online backup service. To do so, click **Settings** on the **Storage state** screen.

8.6.1. Connection attempts

This page allows you to optimize the settings Acronis True Image Home uses when establishing connection to the Online Storage.



Here you can specify how many connection attempts will be made if the first attempt fails (the default number is 10).

In addition you can specify a time interval between connection attempts (10 seconds by default).

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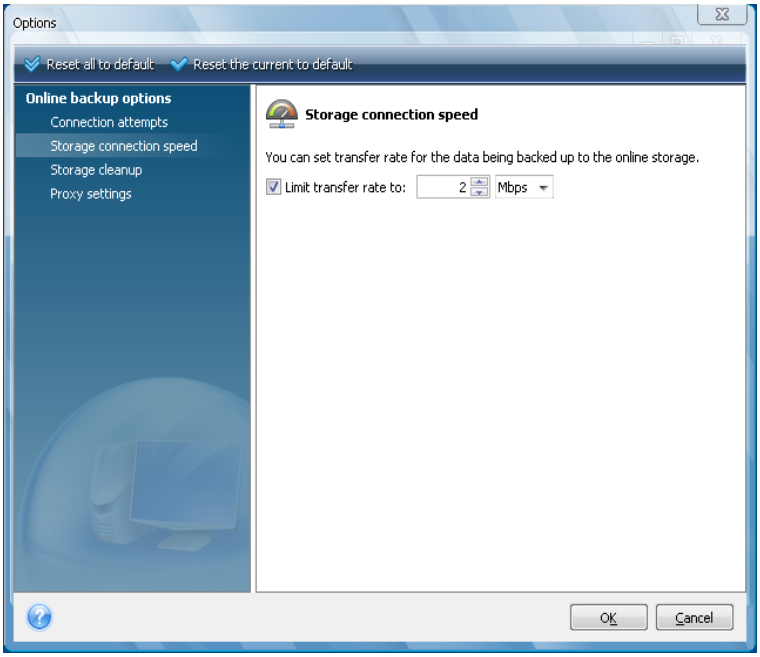
8.6.2. Storage connection speed

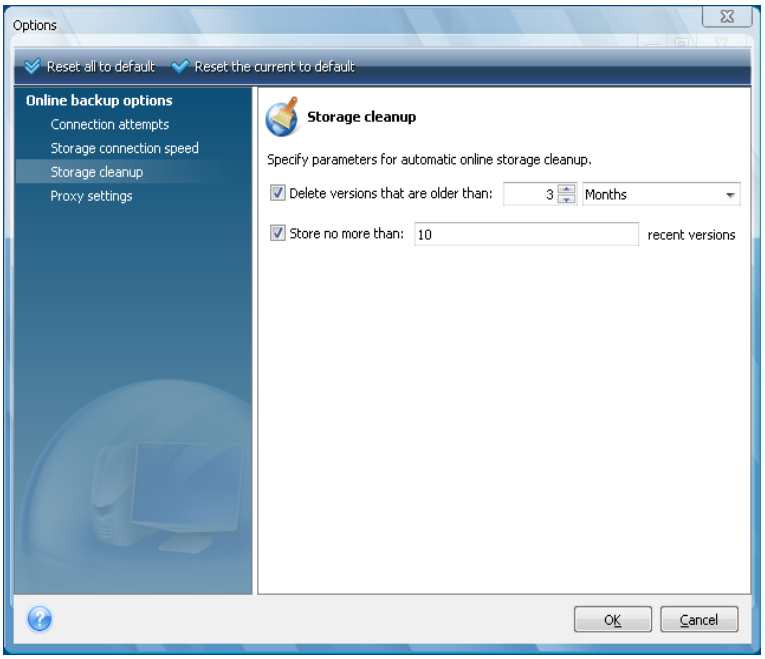
One more option gives you the ability to "throttle" the bandwidth allocated for data transfer to the Online Storage. Set the connection speed that will allow you to send e-mail or surf the Web without annoying slowdowns while online backup is running. To do this, select the **Limit transfer rate to:** check box and set the connection speed (8 Mbps by default).

To back up your data to the Online storage at the maximum speed your Internet connection can provide, unselect the **Limit transfer rate to:** check box.



8.6.3. Storage cleanup

The **Storage cleanup** page is intended for setting the options that enable automatic cleanup of obsolete file versions from the online storage to keep the storage from overfilling.



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You can:

- Delete versions that are older than the specified time period - 3 months by default.
- Specify how many versions of your files must be kept on the Online Storage. This will allow you to return to a previous file version if your changes in a file turn out to be erroneous. By default Acronis True Image Home will keep 10 versions of your files, though you can specify any other number.

8.6.4. Proxy settings

If your computer is connected to the Internet using a proxy server, enable use of the proxy server and enter its settings.

Acronis Online Backup supports only http and https proxy servers.

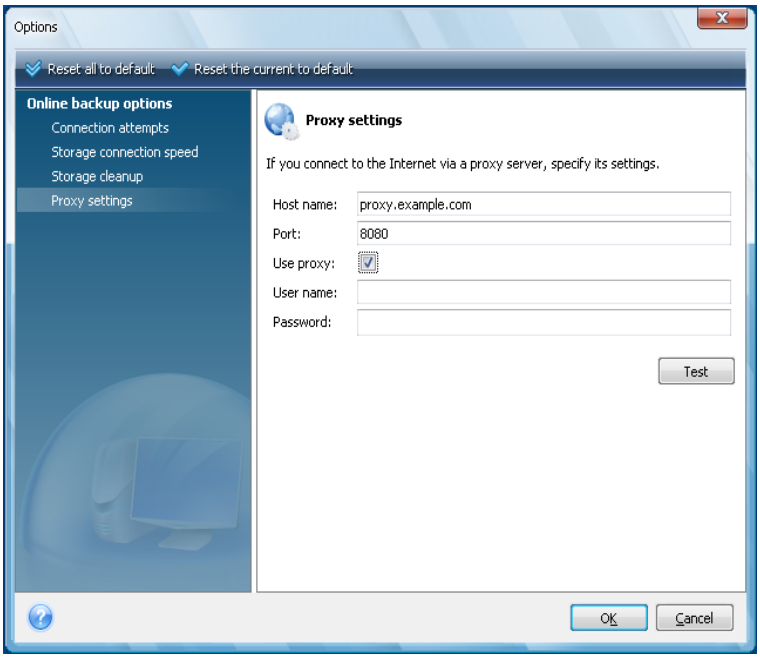
In the **Host name** box, type the name or IP address of the proxy server, such as proxy.example.com or 192.168.0.1.

In the **Port** box, type the proxy server's port, such as 8080.

In the **User name** and **Password** boxes, type the credentials you use for connecting to the proxy server, if necessary.

To test the proxy server connection, click the **Test** button.

If you do not know your proxy server settings, contact your network administrator or Internet service provider for assistance. Alternatively, you can try to take these settings from your browser's configuration.



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9. Additional backup features

9.1. Making reserve copies of your backups

When you choose the My Data backup type for backing up selected files and folders, you can create reserve copies of your backups and save them on the file system, a network drive, or a USB flash drive.

In addition to enhancing the archive security with replication, this feature allows you to copy a set of documents, for example, to a USB stick for working on them at home. So now you can perform a normal backup and copy the same files to a USB stick or any local hard drive. You have the choice of making a reserve copy in the form of regular files, a zip compressed file, or a tib file (optionally with password protection and encryption). A password-protected reserve copy can be encrypted only if you choose to encrypt the main backup and an encryption key of the same length will be used for encrypting the reserve copy.

A reserve copy always contains all the files selected for backup, that is, when creating a reserve copy the program always makes a full backup of the source data. You cannot make a reserve copy in the form of an incremental or differential backup, even in tib format.

Also remember that you will pay for the enhanced convenience and increased security of your data by the time required for performing the task, because normal backup and reserve copying are performed one after another and not simultaneously.

And now let us consider a case when you may need to make a reserve copy of your backup.

Suppose you have worked hard on an urgent project all day and the deadline is tomorrow morning. You decide to back up the results of the day's work in Acronis Secure Zone and make a reserve copy of the project on a USB stick to finish the project at home. To make a reserve copy:

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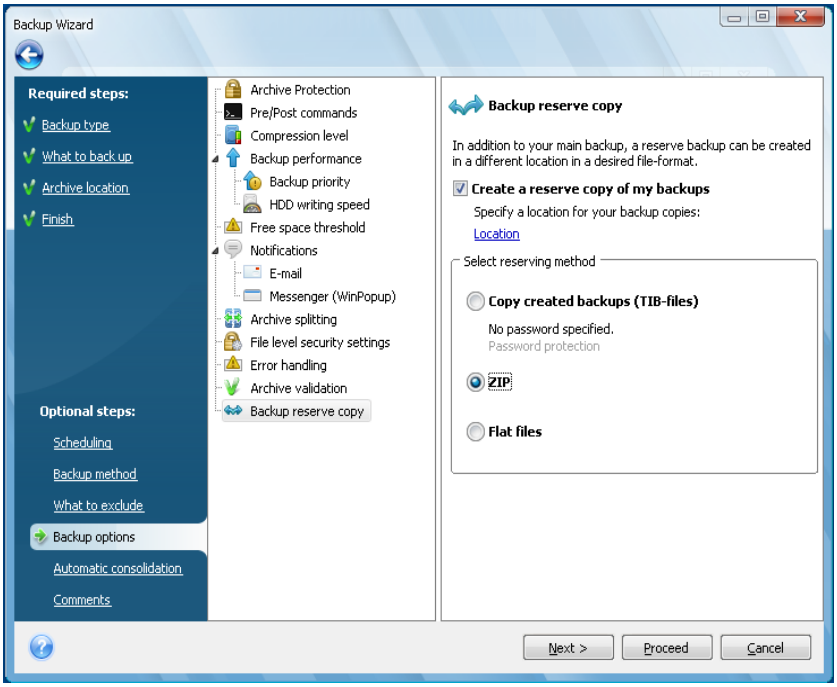
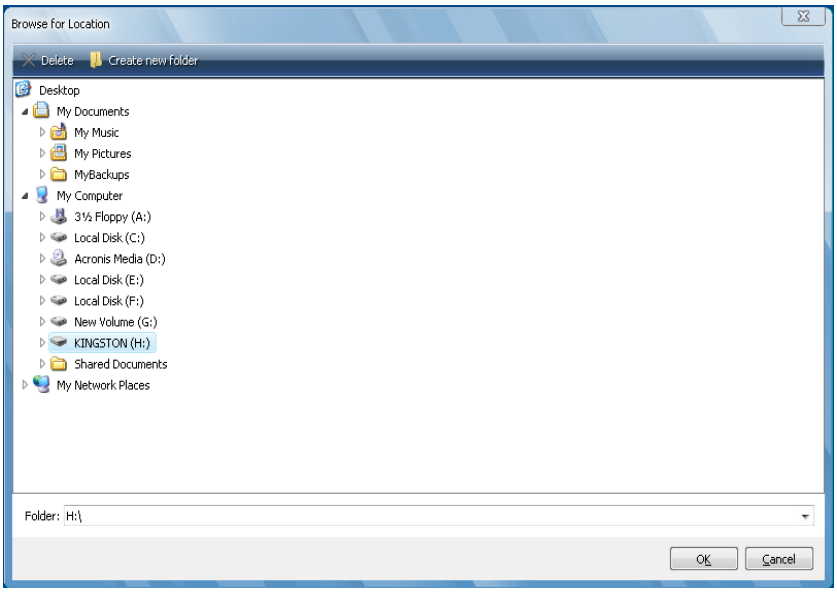
1. When you come to the **Backup options** step while configuring a My Data backup task in the Backup Wizard (or select that step after completing all the required steps), choose **Backup reserve copy** and then select the **Create a reserve copy of my backups** box (if it is not selected in the default backup options).



2. Choose how to duplicate the project file(s) on the USB stick. If you need to save space, choose duplicating as a zip file. Click on the **Location** link, select the drive letter of the USB stick and create a folder for a reserve copy by clicking on the **Create new folder** icon.



3. Finish configuring your backup task as usual.
4. Click **Proceed** and do not forget to take the USB stick home.

Please be aware that built-in support of zip files in Windows does not cover operations with multivolume zip archives, and zip archives exceeding 4GB in size or which contain files of more than 4 GB each. Also remember that CD/DVDs are not supported as locations for reserve copies created as zip archives and flat files.

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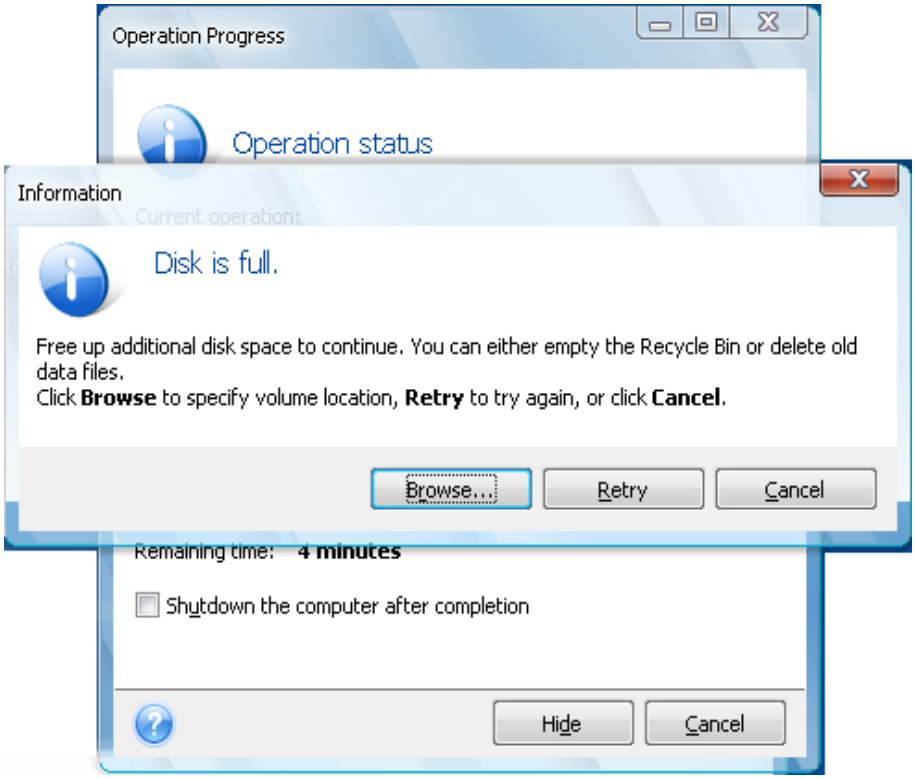
9.2. Archive to various places

Now Acronis True Image Home offers much greater flexibility. You can save full, incremental and differential backups to different places including a network share, CD/DVD, USB stick, as well as any local internal or external hard drive.

You cannot use Acronis Secure Zone as one of the places for storing a part of backups belonging to the same backup "chain", because such backups may be automatically deleted during automatic backup archive consolidation in Acronis Secure Zone. As a result, the backup chain will be corrupted. In addition, the Archive to various places feature does not work with FTP servers.

One more useful aspect of this feature is its ability to split backups "on-the-fly". Suppose you perform a backup to a hard disk and in the middle of the backup process Acronis True Image Home finds out that the disk, to which you are backing up, does not have sufficient free space for completing the backup. The program displays a message warning you that the disk is full.


Operation Progress
Operation status
Information
Current operation:
Disk is full.
Free up additional disk space to continue. You can either empty the Recycle Bin or delete old data files.
Click Browse to specify volume location, Retry to try again, or click Cancel.
Browse...
Retry
Cancel
Remaining time: 4 minutes
Shutdown the computer after completion
Hide
Cancel

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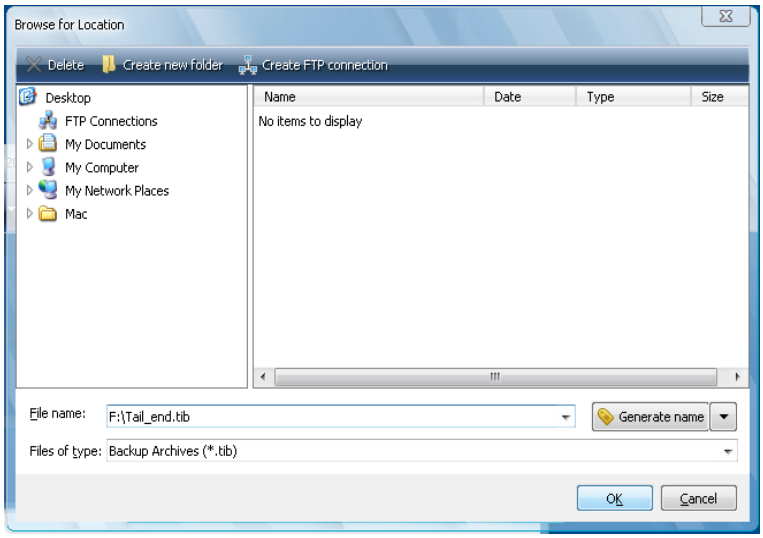
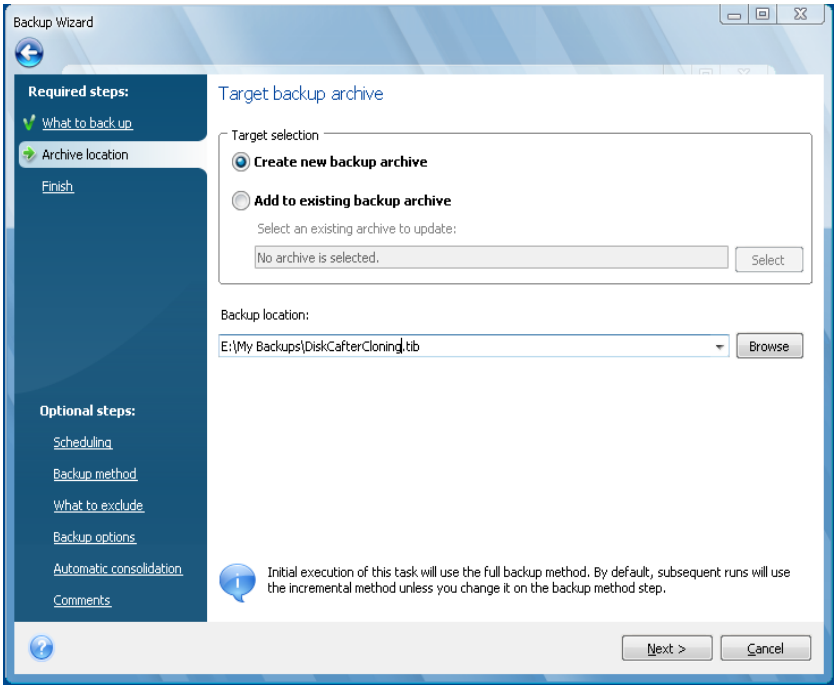
To complete the backup, you may either try to free some space on the disk and click **Retry** or select another storage device. To choose the latter option, click **Browse** in the information window. The Browse for Location window appears.



The left pane shows the storage locations available on your computer. After you select a disk in the left pane, the program shows the free space on that disk in the right pane. If the free space is enough for completing the backup, assign a name for the file that will contain the remaining data being backed up. You can either enter the name manually (for example, "Tail_end.tib") or use the file name generator (a button to the right of the line). Then click **OK** and Acronis True Image Home will complete the backup.

Acronis True Image Home permits to assign any backup archive whatever name you wish. Suppose you bought a new hard disk drive and transferred to it the contents of the old one by cloning. You decided to perform a full backup of the new system disk and named it "DiskCafterCloning".



After a while you chose to upgrade to Windows Vista. To be on the safe side, you made an incremental backup before the upgrade and named it "DiskCBeforeUpgrading". Upon upgrading you

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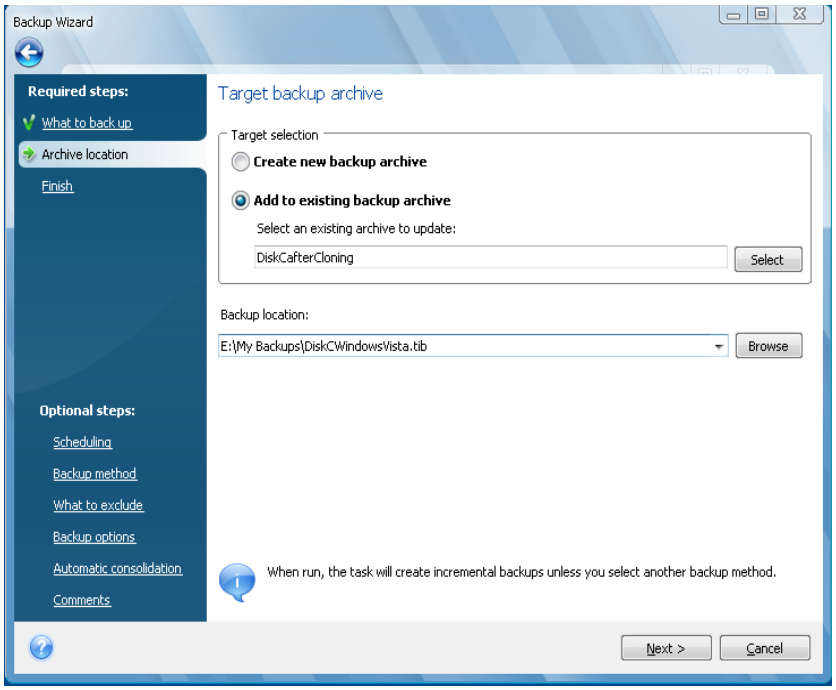
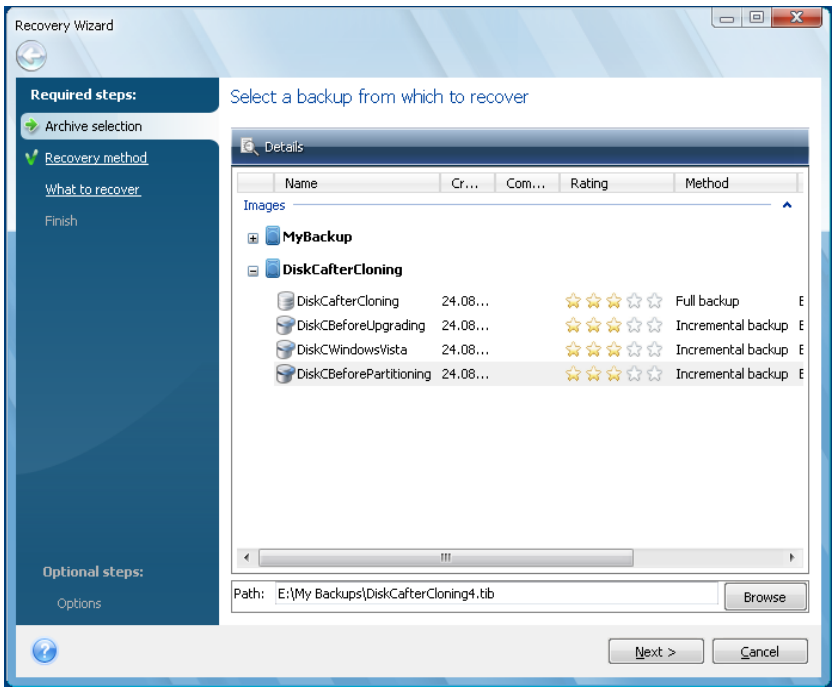
made sure that the new system and all your applications operate normally and made one more incremental backup naming it "DiskCWindowsVista".



After working under Windows Vista for some time you decided that you would like to try Linux as well. Before creating a partition for Linux you perform an incremental backup of the system disk and name it "DiskCBeforePartitioning", and so on. As a result, if the need to recover arises, you will be able to find at a glance a backup archive corresponding to the system disk state you want to recover.



As was already mentioned, you can save full and incremental or differential backups to different locations. For example, you can save the initial full backup to an external USB hard drive, and then burn the subsequent incremental backups (or differential backups that are an even better choice) to CDs or DVDs. It is also possible to save such backups to a network share. If you have saved backups

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belonging to the same backup "chain" to various places, Acronis True Image Home may prompt you for the locations of previous backups during data recovery, in the case when the selected backup archive does not contain the files you want to recover (or contains only a part of them).

9.3. Backup Wizard – detailed information

Here we give detailed information on all steps of the Backup Wizard. Let's go through all the steps:

1. Start Acronis True Image Home.
2. Click **Backup** on the sidebar, then select **Disk and Partition Backup** or **File Backup** in the right pane depending on what you want to back up.

Backup Wizard allows you to perform the following backups:

Disk and Partition Backup (image backup of any set of disks/partitions)

My Data (file-level backup of any set of files, folders, or entire file categories)

System State (file-level backup of the boot files, registry, protected Windows files, and COM+ CLASS registration database). Backing up the System state allows you to recover the system files, drivers, etc., but not the data files and folders you use in your work. For more information on the System State backup see Microsoft TechNet article Backing Up and Restoring Data.

My E-mail (file-level backup of Microsoft Outlook, Microsoft Outlook Express, and Windows Mail settings and messages).

My Application Settings (file-level backup of Windows applications settings)

File-level backup operations are supported only for the FAT and NTFS file systems.

Selecting a backup type starts the Backup Wizard, which will guide you through the steps of creating a backup task. Depending on the backup type chosen, the number of steps in the Backup Wizard may change. For example, in case of backing up the System State, the program backs up predefined data and requires the minimum number of settings for configuring a backup task.

After you finish configuring a backup task, it can be started immediately if you do not unselect the **Run task now** box prior to clicking **Proceed**.

9.3.1. Selecting what data to back up

When the Backup Wizard screen appears, select what data to back up (in case of choosing the System State, this step will be omitted).

Disk and Partition Backup - select the disks or partitions to back up. You can select a random set of disks and partitions. The wizard's right pane shows the hard drives of your computer. Selecting a hard drive results in selecting all partitions on that drive. If a hard drive has more than one partition, you may want to select individual partitions for backing up. To do so, click on the Down arrow at the right of the drive's line. Select the desired partition(s) in the displayed partition list. By default the program copies only the hard disk sectors that contain data. However, sometimes it might be useful to make a full sector-by-sector backup. For example, perhaps you deleted some files by mistake and want to make a disk image before trying to undelete them because sometimes un-deleting may create havoc in the file system. To make a sector-by-sector backup, select the **Back up sector-by-sector (requires more storage space)** box. Please note that this mode increases processing time and usually results in

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a larger image file because it copies both used and unused hard disk sectors. In addition, when configuring a sector-by-sector backup of a complete hard disk you can include in the backup unallocated space on the hard disk by selecting **Back up unallocated space**. Thus you will include in the backup all physical sectors on the hard drive.

My Data - select the file category(ies) to back up: **documents, finance, images, music,** and **video**. Each category represents all files of associated types found on the computer's hard drives. Furthermore, you can add any number of custom categories containing files and folders. The new categories will be saved and displayed along with the above. You can change contents of any custom or default file category (edit the category) or delete it. The default file categories cannot be deleted.

For more information on custom categories see Creating a custom data category for backups (p. 84). If you do not want to keep custom contents of the current backup by creating a data category, simply select the files/folders from the tree. This set will be effective only for the current backup task. File filtering can be applied to manually added folders in the optional **What to exclude** step.

My Application Settings - back up custom settings of Windows applications. This is a subset of file-level backups that backs up predefined folders and requires minimum user selections. The program displays a list of supported applications that have been found on the computer, sorted by categories. You can select a random set of categories and applications.

It is important to note that the program backs up only your settings, and not the application executable files. If an application seems to malfunction or ceases to run, reinstall it using the latest updates and then recover your settings from the backup.

To select all the supported applications found on the computer for backing up, check the Installed Applications box. For instant messenger applications, the program will back up both the settings and history.

The list of supported applications will be expanded gradually. Updates will be available with new program builds or via the Internet.

My E-mail - Acronis True Image Home offers a straightforward way to back up messages, accounts and settings for Microsoft Outlook 2000, 2002, 2003, 2007, Microsoft Outlook Express, and Windows Mail. E-mail backup is a subset of file-level backups that backs up predefined folders and requires minimum user selections. However, if need be, you can select Microsoft Outlook components and folders individually. The list of supported e-mail clients will be gradually built up. Updates will be available with new program builds or via the Internet.

You can select the following items:

- Messages contained in .PST/.DBX Database Files
- E-mail accounts

For Microsoft Office Outlook 2000, 2002, 2003, 2007

- Mail Folders
- Calendar
- Contacts
- Tasks
- Notes
- Signatures

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- News Folders
- User Settings
- Address Book

For Microsoft Outlook Express

- Mail Folders
- Address Book (select Windows Address Book).

Acronis True Image Home provides backup of IMAP (Internet Messages Access Protocol) mail folders for Microsoft Outlook. This means that you can back up folders stored on a mail server. For Microsoft Outlook Express and Windows Mail only local e-mail folders backup is available.

Take note that Acronis True Image Home does not support Unicode characters in the items backed up using **My E-mail** backup type.

9.3.2. Selecting archive location

Select the location for the backup archive and specify the archive name.

If you are going to create a new archive (i.e. perform a full backup), select **Create new backup archive** and enter the path to the archive location and new archive file name in the **Backup Location:** field below or click **Browse**, select the archive location on the directory tree and enter the new file name in the **File name** line, or use the file name generator (a button to the right of the line).

When you have chosen the **My Data** backup type for backing up files and/or folders, you can select the zip archive type. For more information see Support for Zip format (p. 24).

CD/DVD and the Acronis Secure Zone are not supported as locations for zip archives.

If you want to append an incremental or differential backup file to an existing archive, select **Add to existing backup archive** and click the **Select** button to select the existing archive you are going to update. If the archive already has incremental or differential backups, you can select any of the target archive files. It doesn't matter which one you select, as the program recognizes them as a single archive.

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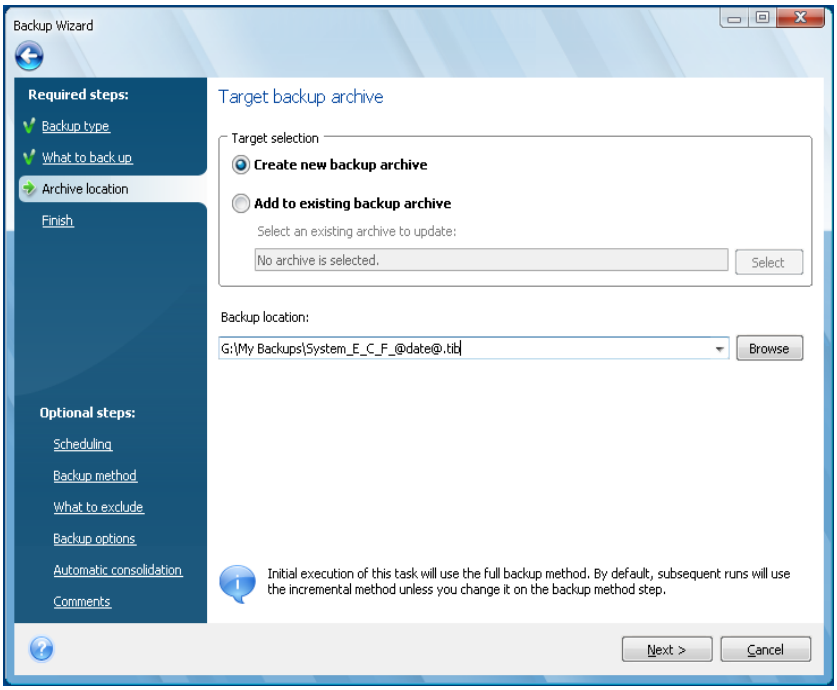
If you want to change the location of added backup files, browse for a new backup location after clicking the **Browse** button, otherwise leave the location the same as that of the existing archive.



The "farther" you store the archive from the original folders, the safer it will be in case of disaster. For example, saving the archive to another hard disk will protect your data if the primary disk is damaged. Data saved to a network disk, an FTP server or removable media will survive even if all your local hard disks are damaged. You can also use the Acronis Secure Zone for storing backups (see details in Acronis Secure Zone™ (p. 21)).

See notes and recommendations for supporting FTP servers in Supported storage media (p. 14).

After selecting the archive location and naming the backup archive to be created, you have completed all the required steps for a backup task and this is confirmed by the fact that you come to the **Finish** step with the Summary of the backup task being displayed on the right pane. All the remaining steps are optional and in many cases you may omit them and just click **Proceed**. For example, when you want to proceed with backup right away, you can omit the **Scheduling** step. If you do not want to exclude any files from the backup, you can omit the **What to exclude** step. When you want to use the default backup options, you can omit the **Backup options** step, and so on.

Now let's see what optional steps you can set up while configuring a backup task. Click the **Options** button.

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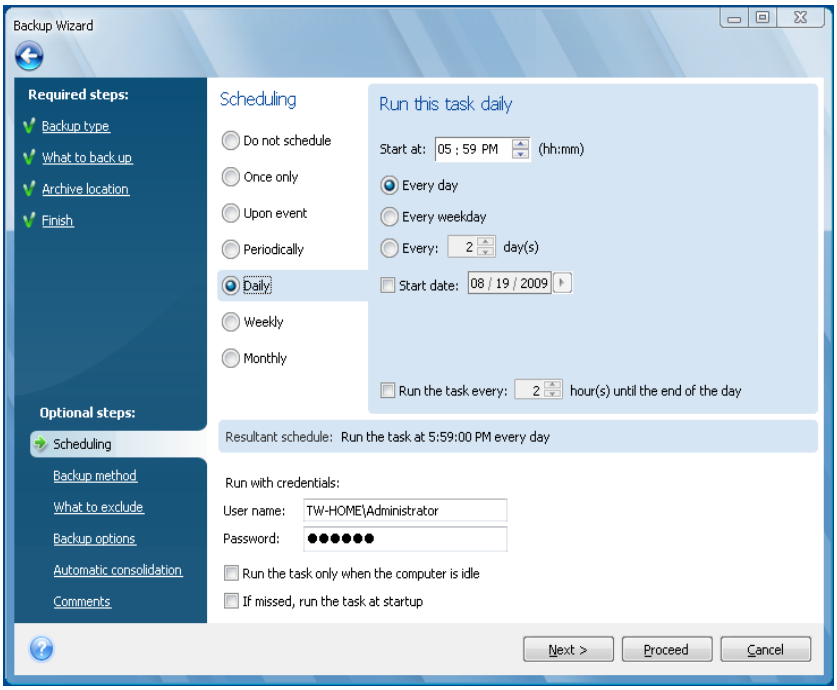
9.3.3. Scheduling

By default, the **Do not schedule** option is chosen so the task will run after completing the wizard and clicking **Proceed**. However, you may wish to schedule the task being configured by choosing one of the scheduling options.



For more information see Scheduling tasks (p. 111).

9.3.4. Backup method

Select whether you want to create a full, incremental or differential backup. If you have not backed up the selected data yet, or the full archive is old and you want to create a new master backup file, choose full backup. Otherwise it is recommended that you create an incremental or differential backup (see Full, incremental and differential backups (p. 19)).

*If you are adding a backup to the existing backup archive, the **Full** method will be unselectable.*

You can set a backup policy for the backup task. Acronis True Image Home offers three types of backup policies:

- create full backups only
- create full backups after a specified number of incremental backups
- create full backups after a specified number of differential backups

When the first backup on a schedule is executed, Acronis True Image Home always creates a full backup.

If you choose (1) by selecting the **Full** method, you can also choose what to do with the previous full backup when creating a new one. By default Acronis True Image Home overwrites the previous full backup, but you can choose to keep it by unselecting the **A new full backup overwrites the previous one** box.

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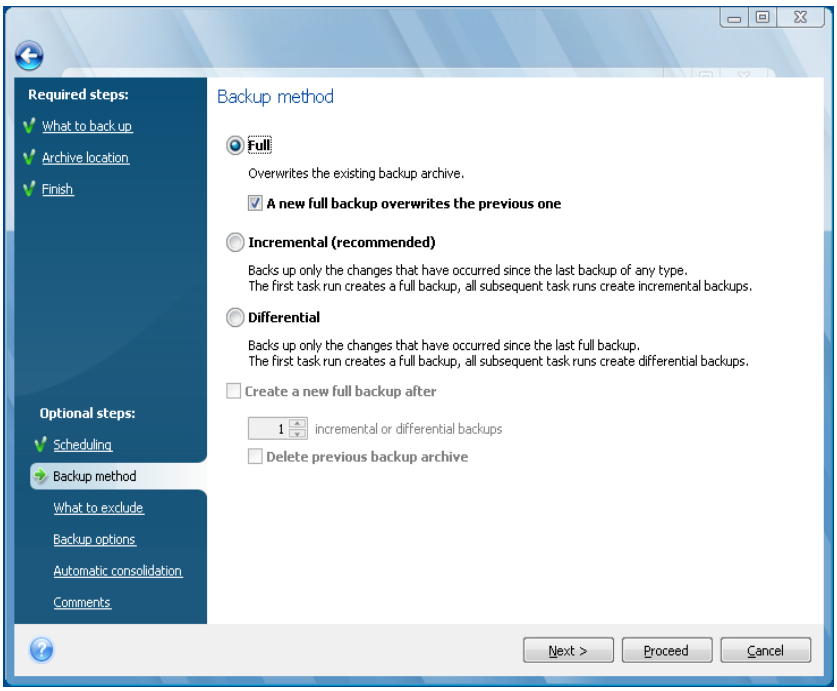
If you choose (2) or (3) by selecting the **Create a new full backup after** box, the next backups will be incremental (or differential) until the specified number of incremental (differential) backups is reached. After the selected number of incremental or differential backups is made, the next time a new full backup and a set of subsequent incremental (differential) backups will be created; this process will then continue until you decide to change it.

When the **Delete previous backup archive** box is selected, creation of a new full backup in accordance with the specified backup policy results in deletion of the complete previous backup chain – the previous full backup and its subsequent incremental (or differential) backups regardless of the overall limitations you set on the archive at the Automatic consolidation step.

If you decide to keep old backups (by not selecting the **Delete previous backup archive** box) and creation of a new full backup results in violation(s) of the limits set for automatic consolidation, the program will use the following algorithm:

1. if the actual number of backups exceeds the maximum number of backups; the program automatically consolidates the old full backup with the oldest incremental (differential) one to correct this quota violation;
2. if after correcting the number of backups limit violation other quota violations remain; the program consolidates the oldest backup to correct the storage period of old backups limit violation (if possible - otherwise it deletes the old full backup);
3. if after correcting the storage period of old backups limit violation the archive size limit violation remains; the program consolidates the old full backup with the oldest incremental (differential) one, then will repeat consolidation (if necessary and possible);
4. if after consolidating all the previous backups the archive size quota violation remains; the old backup archive will be deleted in order to correct the violation;
5. if the new full backup file size exceeds the archive size limit; the program will record a warning into the log.


Required steps:
What to back up
Archive location
Finish
Optional steps:
Scheduling
Backup method
What to exclude
Backup options
Automatic consolidation
Comments
Backup method
Full
Overwrites the existing backup archive.
A new full backup overwrites the previous one
Incremental (recommended)
Backs up only the changes that have occurred since the last backup of any type.
The first task run creates a full backup, all subsequent task runs create incremental backups.
Differential
Backs up only the changes that have occurred since the last full backup.
The first task run creates a full backup, all subsequent task runs create differential backups.
Create a new full backup after
1
incremental or differential backups
Delete previous backup archive
Next >
Proceed
Cancel

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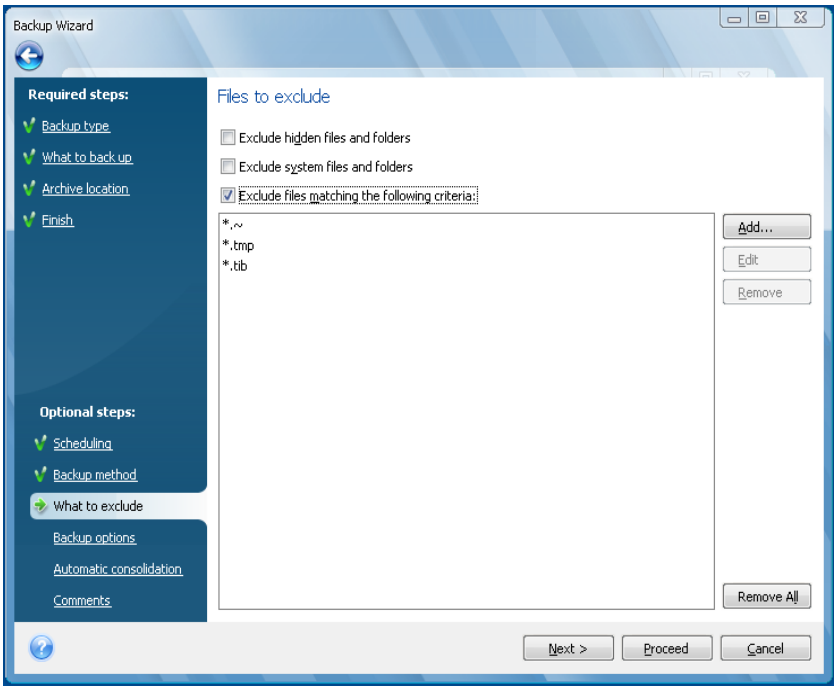
9.3.5. Selecting what to exclude

This step will be present only for the Disk and Partition Backup and My Data backup types. It enables you to exclude unnecessary files from your backup in case you just want to exclude certain file types without creating custom categories. You can exclude hidden or system files and folders, as well as files matching the criteria you specify. You can add your own criteria by clicking **Add**. While adding criteria, you can use the common Windows wildcard characters and type several criteria in the same line separating them by semicolons. For example, to exclude all files with .gif and .bmp extensions, you may type ***.gif;*.bmp**. One more thing – if, for example, you want to exclude all the files with the name of **test** regardless of their extension, you should specify exclusion criteria such as **test.***, otherwise those files will not be excluded. You can also specify the path to a folder to be excluded, for example, **C:\Program Files\Common Files**. Note that the path must end with the "\" symbol, otherwise the folder will not be excluded.



These filter settings will take effect for the current task. For information on how to set the default filters that will be used each time you select folders to back up, see What to exclude *(p. 77)*.

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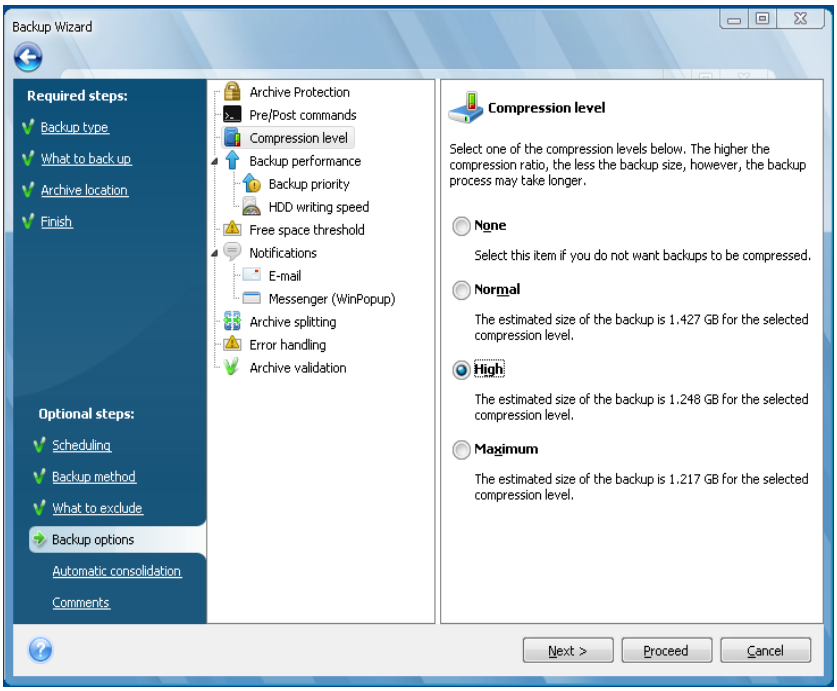
9.3.6. Selecting the backup options

Select the backup options (that is, backup file-splitting, compression level, password protection, etc.). The settings of the options will be applied only to the current backup task.



Or, you can edit the default backup options and local storage settings if you want to save the current settings for future tasks. For more information see Fine-tuning your backups (p. 77).

9.3.7. Setting automatic consolidation

Automatic consolidation of a backup archive is enabled by setting the overall limitations for the archive. These limitations include:

- a maximum number of backups
- a maximum storage period for the archive files

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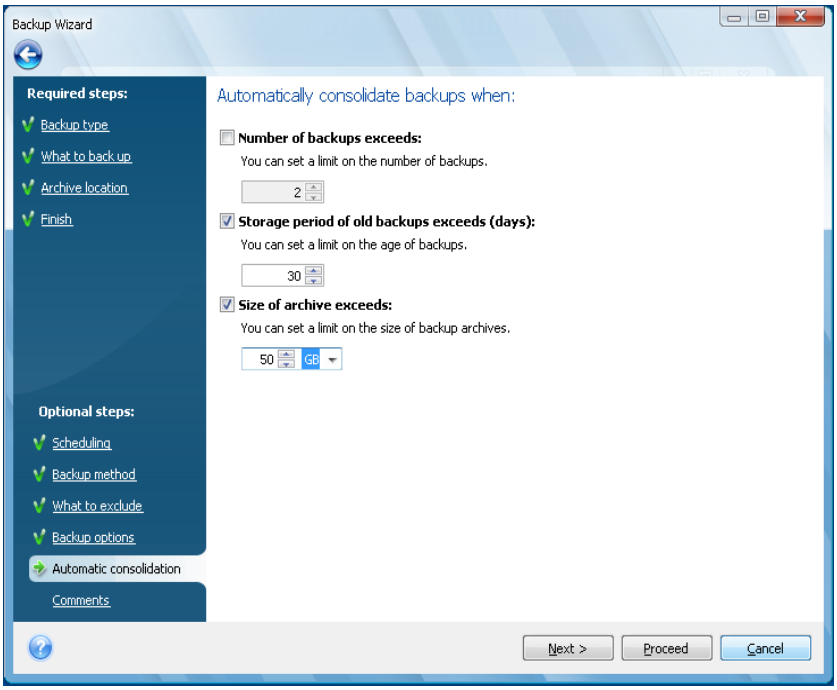
- a maximum archive size



By default there are no limits set and automatic consolidation is not performed. To enable automatic consolidation, you must select at least one of the limits and either leave its default value or change it according to your needs.

If limits are set, then after creating a backup the program checks the archive for quota violations, such as exceeding a pre-set maximum number of gigabytes set aside for backups and, if any limitation is exceeded, consolidates the oldest backups. For example, if you've pre-set your archive to store 50GB of backup files and your backups reach 55GB, you have exceeded a quota and the system will respond automatically based on rules that you've already set. This operation creates a temporary file and thus requires disk space. Consider also that the quota must be violated so that the program can detect the violation. Therefore, to be able to consolidate the files, the program needs some space on the disk in excess of the archive quota. The extra amount of space can be estimated as the size of the largest backup in the archive, though sometimes consolidation requires more space.

In case of setting a limit on the number of backups, the actual number of backups can exceed the maximum number of backups by one. This enables the program to detect quota violation and start consolidation. Similarly, if you pre-set a backup storage period, for example, 30 days, the program will start consolidation when the oldest backup is stored for 31 days.

9.3.8. Providing a comment

Providing a comment for the archive can help identify the backup and prevent you from recovering the wrong data. However, you can choose not to make any notes. The backup file size and creation date are automatically appended, so you do not need to enter this information.

In addition, you can provide or edit a comment after the backup has been executed. This may be helpful for adding comments to scheduled backups, which run unattended. To edit or add a comment, go to the **Data recovery and backup management** screen by clicking **Recovery** on the sidebar, choose the appropriate backup, right-click and select **Edit comments** in the shortcut menu.

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9.3.9. The backup process

Clicking **Proceed** after completing all the optional steps you need for configuring the current backup task will start the task execution if you have configured the task to be started manually, by choosing the **Do not schedule** option at the Scheduling step, or having selected the **Run task now** box for a scheduled task (to select the box, you should return to the **Finish** step). Otherwise the task will run when the scheduled time comes.

The task progress will be shown in a special window. You can stop the procedure by clicking **Cancel**.

You can also close the progress window by clicking **Hide**. The backup creation will continue, but you will be able to start another operation or close the main program window. In the latter case, the program will continue working in the background and will automatically close once the backup archive is ready. If you prepare some more backup operations, they will be queued after the current one.

9.4. Fine-tuning your backups

You can fine-tune your backups to specific tasks. Such fine-tuning is made by configuring backup options before starting a backup task.

You can set temporary backup options by changing the default backup options while creating a backup task. If you would like to use the changed options for future tasks, make appropriate changes in the default backup options after selecting **Tools & Utilities** → **Options** → **Backup options**. Incidentally, you can always restore the default backup options to the values preset during installation of Acronis True Image Home. To do this, click **Reset all to default** on the toolbar of the **Options** window. To reset just a single backup option, select it on the left pane and click **Reset the current to default**.

*Clicking **Reset all to default** will reset all the default options (for backup/recovery, notifications, etc.) to their preset values, so this button should be used with caution.*

In addition, when backing up your data files, the program provides for creating custom data categories for backup.

9.4.1. Backup options

9.4.1.1. What to exclude

By default, the program excludes files with the following extensions from backups: **.~, .tmp**, and **.tib**. You can also set other default filters for file exclusion, for example, you may want hidden and system files and folders not to be stored in the backup archives as well.

In addition, you can apply your own filters using the common Windows wildcard characters. For example, to exclude all files with extension .exe, add ***.exe** mask. **My???.exe** will exclude all .exe files with names consisting of five symbols and starting with "my".

This option affects real folders selected at **My Data** backup. If the name of a whole folder matches a mask you set, this folder will be excluded with all its content. Backup of a file category uses file filters preset at creation of the category. **My Application Settings, System State** or **My E-mail** backup implies dedicated lists of files that must not be filtered.

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9.4.1.2. Pre/post commands

You can specify commands or batch files to be executed automatically before and/or after the *backup procedure*. For example, you may want to remove some temporary (.tmp) files from the disk before starting backup or configure a third-party antivirus product to be used each time for scanning the files to be backed up before the backup starts. Click **Edit** to open the **Edit Command** window where you can easily input the command, its arguments and working directory or browse folders to find a batch file.

Please do not try to execute interactive commands, i.e. commands that require user input (for example, "pause"). These are not supported.

Unselecting the **Do not perform operations until the command's execution is complete** box, selected by default, will permit the backup process to run concurrently with your command execution.

If you want the backup to be performed even if your command fails, unselect the **Abort the operation if the user command fails** box (selected by default).

You can test execution of the command you created by clicking **Test command**.

9.4.1.3. Compression level

The preset is **Normal**.

Let's consider such an example - you need to backup to a USB stick some files with a total size comparable to or exceeding the USB stick's capacity and want to make sure that the stick accommodates all the files. In this case use the **Maximum** compression for the files to be backed up. However, you should take into account that the data compression ratio depends on the type of files stored in the archive, for example, even the **Maximum** compression will not significantly reduce the backup size if it contains files with already compressed data like .jpg, .pdf or .mp3. It does not make any sense to select the **Maximum** compression for such files because in this case the backup operation will take significantly longer and you will not get an appreciable reduction of backup size. If you are not sure about the compression ratio of a file type, try to back up a couple of files and compare the sizes of the original files and backup archive file. A couple of additional tips: generally, you can use the **Normal** compression level, because in most cases it provides an optimal balance between backup file size and backup duration. If you select **None**, the data will be copied without any compression, which may significantly increase the backup file size, while making the fastest backup.

9.4.1.4. Archive protection

The preset is **no password**.

Suppose you have some files with sensitive information, for example, your tax return, which you need to back up. Acronis True Image Home can help you protect your sensitive information from getting into the wrong hands. The simplest (and the least secure) way is protecting your backup with a password. Let's remind you that to make a password more difficult to guess, it should consist of at least eight symbols and contain both letters (upper and lower case, preferably) and numbers. If you think that a password will not give you sufficient security, use encryption for your backup. Acronis True Image Home allows encrypting backup files with the industry-standard AES cryptographic algorithm. A 128-bit encryption key is sufficient for most applications. The longer the key, the more secure your data. However, the 192 and 256-bit long keys significantly slow down the backup

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process, though in the case being considered this will most likely not be an issue, because the files will not be too large. The encryption settings are available only for password-protected archives.

If you try to recover data from a password-protected archive, or append an incremental/differential backup to such an archive, Acronis True Image Home will ask for the password in a special window, allowing access only to those who know the password.

9.4.1.5. Backup priority

The preset is **Low**.

The priority of any process running in a system determines the amount of CPU usage and system resources allocated to that process. Decreasing the backup priority will free more resources for other CPU tasks. Increasing the backup priority might speed up the backup process by taking resources from the other currently running processes. The effect will depend on total CPU usage and other factors.

9.4.1.6. File-level security settings

Preserve file security settings in archives

The preset is **enabled**.

By default, files and folders are saved in the archive with their original Windows security settings (i.e. permissions for read, write, execute and so on for each user or user group, set in file **Properties** → **Security**). If you recover a secured file/folder on a computer without the user specified in the permissions, you may not be able to read or modify this file.

To eliminate this kind of problem, you can disable preserving file security settings in archives. Then the recovered files/folders will always inherit the permissions from the folder to which they are recovered (parent folder or disk, if recovered to the root).

Or, you can disable file security settings during recovery, even if they are available in the archive (see Files recovery options (p. 101)). The result will be the same.

In archives, store encrypted files in a decrypted state

The preset is **disabled**.

If you do not use the encryption feature available in Windows XP and Windows Vista operating systems, simply ignore this option. (File/folder encryption is set in **Properties** → **General** → **Advanced Attributes** → **Encrypt contents to secure data**).

Check the option if there are encrypted files in the backup and you want them to be accessed by any user after recovery. Otherwise, only the user who encrypted the files/folders will be able to read them. Decryption may also be useful if you are going to recover encrypted files on another computer.

These options relate only to file/folder backups. In addition, they are unavailable for zip backup archives.

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9.4.1.7. Error handling

Ignore bad sectors

The preset is **disabled**.

This option lets you run a backup even if there are bad sectors on the hard disk. Although most disks do not have bad sectors, the possibility that they might occur increases during the course of the hard disk's lifetime. If your hard drive has started making strange noises (for example, it starts making quite loud clicking or grinding noises during operation), such noises may mean that the hard drive is failing. When the hard drive completely fails, you can lose important data, so it is necessary to back up the drive as soon as possible. There may be a problem though – the failing hard drive might already have bad sectors. If the **Ignore bad sectors** box is left unselected, a backup task is aborted in case of read and/or write errors that could occur on the bad sectors. Selecting this box lets you run a backup even if there are bad sectors on the hard disk ensuring that you save as much information from the hard drive as possible.

Do not show messages and dialogs while processing (silent mode)

The preset is **disabled**.

You can enable this setting to ignore errors during backup operations. This feature was mainly designed for unattended backups when you cannot control the backup process. In this mode no notifications will be displayed if errors occur during backup. Instead you can view the detailed log of all operations after the task finishes by selecting **Tasks and Log** on the sidebar and then clicking the **Log** tab. You may use this option when configuring a backup task to be run during the night.

When not enough space in ASZ, delete the oldest archive

The preset is **enabled.**

When this setting is disabled and there is not enough space in the Acronis Secure Zone for the backup file being created, the program will display a dialog warning you that the zone is full and will require your intervention. The backup is suspended until you take a required action and this makes unattended backups impossible. The dialog opens even when the **Do not show messages and dialogs while processing (silent mode)** setting is enabled. So it is advisable to select the **When not enough space in ASZ, delete the oldest archive** box when planning unattended scheduled backups to the Acronis Secure Zone.

9.4.1.8. Removable media settings

- **Ask for first media while creating backup archives on removable media**

  The preset is **enabled**.

You can choose whether to display the Insert First Media prompt when backing up to removable media. With the default setting, backing up to removable media may not be possible if the user is away, because the program will wait for someone to press OK in the prompt box. Therefore, you should disable the prompt when scheduling a backup to removable media. Then, if the removable media is available (for example, CD-R/RW inserted) the task can run unattended.

- **Place Acronis One-Click Restore on media**

  The preset is **disabled**.

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When backing up to removable media, you can make this media bootable and will not need a separate rescue disk.

The **Acronis One-Click Restore** is a minimal addition to your backup media, allowing one-click data recovery from an image archive stored on this media. This means that when booting from the media you click "recover" all data will be recovered to its original place automatically. No options or selections such as resizing partitions will be available.

*The Acronis One-Click Restore can be added to the media only when creating a full backup of an entire hard disk. It cannot be added when creating an incremental or differential backup, as well as backup of a partition. In such case the **Place Acronis One-Click Restore on media** check box will not be present on the **General** tab of the task's backup options even if the box is selected in the default backup options.*

If you want more functionality during recovery, write a full standalone version of Acronis True Image Home to the rescue media. As a result, you will be able to configure the recovery task using Recovery Wizard.

By clicking the **Advanced** tab you can select Acronis True Image Home (Full version) and Acronis System Report. In addition, Acronis True Image Home (Safe version) will be available for those who purchased the boxed version of Acronis True Image Home and installed the appropriate add-on. If you have other Acronis products installed on your computer, such as Acronis Disk Director Suite, the bootable versions of these programs' components will be offered on this tab as well.

9.4.2. Local storage settings

These settings also affect the backup process, for example, they may have a more or less noticeable effect on the backup process speed. Their values also depend on the physical characteristics of the local storage devices.

9.4.2.1. HDD writing speed

The preset is **Maximum**.

Backing up in the background to an internal hard disk (for example, to Acronis Secure Zone) may slow other programs' performance because of the large amounts of data transferred to the disk. You can limit the hard disk usage by Acronis True Image Home to a desired level. To set the desired HDD writing speed for data being backed up, drag the slider or enter the writing speed in kilobytes per second.

9.4.2.2. Network connection speed

The preset is **Maximum**.

If you frequently back up data to network drives, you may consider limiting the network bandwidth used by Acronis True Image Home. To set the desired data transfer speed, drag the slider or enter the bandwidth limit for transferring backup data in kilobytes per second.

9.4.2.3. Free space threshold

The preset is **disabled**.

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You may want to be notified when the free space on the backup storage becomes less than the specified value. To enable such notification, select the **On insufficient free disk space** box, then specify the free space threshold value in the below fields.

When this option is enabled, Acronis True Image Home will monitor free space on your backup storage. If after starting a backup task Acronis True Image Home finds out that the free space on the selected backup archive location is already less than the specified value, the program will not begin the actual backup process but will immediately inform you by displaying an appropriate message. The message offers you three choices - to ignore it and proceed with the backup, to browse for another location or to cancel the task. In case of choosing to cancel the backup you can either free some space on the storage and restart the task or create a new task with another location for the backup archive. If you choose **Browse**, select another storage, click **OK** and the backup file will be created on that storage.

If the free space becomes less than the specified value while the backup task is being run, the program will display the same message and you will have to make the same decisions. However, if you choose to browse for another location, you will need to assign a name for the file that will contain the remaining data being backed up (or you may accept the default name assigned by the program).

Acronis True Image Home can monitor free space on the following storage devices:

- Local hard drives
- USB cards and drives
- Networks shares (SMB/NFS)

This option cannot be enabled for FTP servers and CD/DVD drives.

The message will not be displayed if the "Do not show messages and dialogs while processing (silent mode)" box is selected in the "Error handling" settings.

9.4.2.4. Archive splitting

Sizeable backups can be split into several files that together form the original backup. A backup file can be split for burning to removable media or saving on an FTP server (data recovery directly from an FTP server requires the archive to be split into files of no more than 2GB). A backup destined for the Acronis Secure Zone cannot be split.

Suppose you have a full backup of your PC on an external hard disk, but want to make one more backup copy of the system to keep it in a different location from the first one for added security. However, you do not have one more external hard disk, and a USB stick would not accommodate such a large backup. Using Acronis True Image Home you can make a reserve backup copy on blank DVD-R/DVD+R discs, which are very cheap nowadays. The program can split large backups into several files that together form the original backup. If you have enough space on your PC's hard disk, you can first create a backup archive consisting of multiple files with a specified size on the hard disk and burn the archive to DVD+R discs later on. To specify the split file size, select **Fixed size** mode for **Archive splitting** and enter the desired file size or select it from the drop-down list.

If you do not have enough space to store the backup on your hard disk, select **Automatic** and create the backup directly on DVD-R discs. Acronis True Image Home will split the backup archive automatically and will ask you to insert a new disc when the previous one is full.

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Creating backups directly on CD-R/RW or DVD+R/RW might take considerably more time than it would on a hard disk.

9.4.2.5. Backup reserve copy

The preset is **disabled**.

You may want Acronis True Image Home to make reserve copies of your backups in a certain location each time when you choose the My Data backup type for backing up selected files and folders. To enable creation of reserve copies, select the **Create a reserve copy of my backups** check box and then choose the method for making reserve copies. You have three choices: duplicate the backups as tib files, make reserve copies as zip archives, or simply copy the files and/or folders to a specified location "as is".

To specify the location for storing reserve copies of your backups, click the **Location** link. Select a location – a local hard disk, USB stick, or a network share. You can create a folder for reserve copies by clicking the **Create new folder** icon. Reserve copies created as tib and zip files will be named automatically as follows:

```
backupfilename_reserved_copy_mm-dd-yyyy hh-mm-ss AM.tib; or

backupfilename_reserved_copy_mm-dd-yyyy hh-mm-ss PM.zip,
```

where mm-dd-yyyy hh-mm-ss is the date and time of reserve copy creation in the following format: month (one or two digits), day (one or two digits), year (four digits), hour (one or two digits), minute (two digits), and second (two digits). AM or PM is a 12-hour period.

For example: *MyBackup_reserved_copy_8-15-2008 9-37-42 PM.zip*

If you choose reserve copies to be made in the form of flat files, those files will be placed into folders which will be automatically created and named as follows: *backupfilename_reserved_copy_mm-dd-yyyy hh-mm-ss AM (or PM).*

After you set the backup reserve copy settings, Acronis True Image Home will create reserve copies each time you select the My Data backup type. If a reserve copy could not be made due to a lack of free space in the selected location or due to disconnection of the selected storage device (e.g. a USB stick), the program will write an error message to the event log.

9.4.2.6. Archive validation

Validate backup archive when it is created

The preset is **disabled**.

When enabled, the program will check the integrity of the just created or supplemented archive immediately after backup. When setting up a backup of critical data or a disk/partition backup, we strongly recommend you to enable the option to ensure that the backup can be used to recover lost data.

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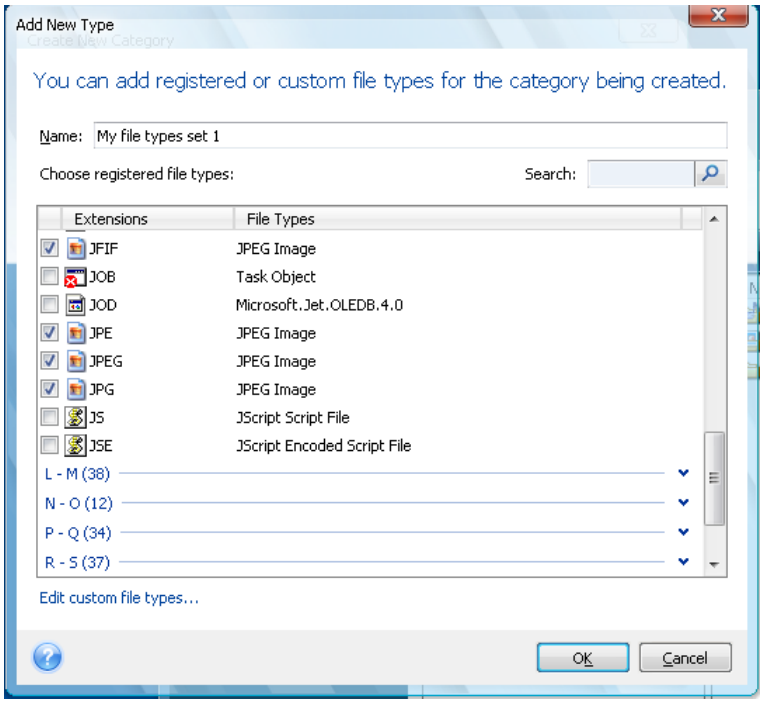
9.4.3. Creating a custom data category for backups

To add a custom data category, click **Add New Category** in the **Files to back up** screen of the Backup Wizard, select the folder (data source) and provide a name for the category. You can include in the category all files in the selected folder or apply filters to select the specific types of files that you wish or do not wish to back up.

To set a filter, select its type: **Back up files of the following types only** or **Back up files of all types in the source except the following**. Then click **Add** and select the desired file types in the window that appears.



You can select file types as follows:

1. By name. Enter the file name in the upper **Name** field. You can use the common Windows wildcard characters. For example, *My???.exe* will select all .exe files with names consisting of five symbols and starting with "my".
2. By type. Select the desired file types in the list. You can also search the desired registered file types by entering their extension or description in the **Search** field.
3. By extension. Click the **Edit custom file types…** link and enter the extensions (semicolon separated) in the **File extensions** field.

If you do not want to keep custom contents of the current backup, simply select the files/folders from the tree. This set will be effective only for the current backup task.

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10. Data recovery with Acronis True Image Home

The ultimate purpose of data backup is recovery of the backed up data when the original is lost due to hardware failure, fire, theft or just erroneous deletion of some important files.

There may be various reasons for recovering your system - from unstable operation after installing a new application, driver or Windows update to complete failure of the system hard drive or replacement of the old hard drive by a new larger one. In addition, it may be necessary to recover either only the system partition or the entire system disk comprising several partitions including hidden ones. Acronis True Image Home provides for all these cases, though details of recovery may differ. In any case, it is better to perform system recovery when booting from the rescue media.

On the other hand, recovery of a data disk/partition or files and folders is usually performed in Windows.

10.1. Recovering your system partition

Let's first consider the simplest case - recovery of the system partition to the original location on the original hard disk drive.

As recovery of the system partition is one of the most important operations, it requires careful preparation even when you just want to recover a previous "known good" Windows state. While preparing for recovery you need to:

a) create and test Acronis bootable rescue media. For more information on testing media see Testing bootable rescue media (p. 28);

b) boot from the rescue media and validate the backup you want to use for recovery. Such validation is very important because Acronis True Image Home deletes the target partition (the system partition in this case) when starting partition recovery, so you may find yourself without your system and applications if the backup file is corrupted. In addition, there were reports from users that a backup archive that has been successfully validated in Windows is declared corrupted when being validated in the recovery environment. This may be due to the fact that Acronis True Image Home uses different device drivers in Windows and the recovery environment.

c) assign unique names to the disks and partitions used on your computer. This is strongly recommended because the drive lettering in Windows and in the recovery environment may differ. If you have not done this before making the backup, you can assign names now. The names will help you in finding the drive containing your backups as well as the target system partition.

d) optionally check the system hard drive for errors using Microsoft's Chkdsk utility, which is part of Windows.

Assuming that you have carried out the above, let's proceed with recovery.

Attach the external drive if it contains the backup archive to be used for recovery and make sure that the drive is powered on. This must be done before booting from Acronis rescue media.

1. Arrange the boot sequence in BIOS so as to make your rescue media device (CD, DVD or USB stick) the first boot device. See Arranging boot sequence in BIOS (p. 192).
2. Boot from the rescue media and select Acronis True Image Home (Full version).

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3. Select **Recovery** → **Disk and Partition Recovery** in the main menu and then choose the image backup of your system partition (or entire system disk) that you want to use for recovery. Right-click on the backup and choose **Recover** in the shortcut menu.

   If the disks have different disk letters in Windows and the recovery environment, the program will display the following error message: "Acronis True Image Home cannot detect volume N of "Name" archive", where Name is the name of the required image backup archive and volume number (N) may be different depending on the number of backups in the archive. Click **Browse** and show the path to the archive.

4. Select **Recover whole disks and partitions** at the Recovery method step.

5. Select the system partition (usually C) on the **What to recover** screen. If the system partition has a different letter, select the partition using the **Flags** column. It must have the **Pri**, **Act** flags. As you are recovering the system partition to the original hard drive, there is no need to select the "MBR and track 0" box.

6. At the "Settings of partition C" (or the letter of the system partition, if it is different) step check the default settings and click **Next** if they are correct. Otherwise change the settings so as to suit you before clicking **Next**.

7. Carefully read the summary of operations at the **Finish** step. If you have not resized the partition, the sizes in the **Deleting partition** and **Recovering partition** items must match. If you do not want to validate the backup, click **Proceed**, otherwise click **Options** and select the "Validate backup archive before recovery" box before clicking **Proceed**.

8. When the operation finishes, exit the standalone version of Acronis True Image Home, remove the rescue media and boot from the recovered system partition. After making sure that you recovered Windows to the state you need, restore the original boot sequence.

10.2. Recovering a disk backup to a different capacity hard disk

Recovery of a disk backup containing several partitions to a hard disk that has a different capacity using manual resizing of the partitions can be considered as one of the most complicated operations in Acronis True Image Home. This is especially true when you have backed up the original hard disk containing a hidden diagnostic or recovery partition.

Recovering a dual/multiboot system disk e.g. with Windows and some flavor of LINUX may be even more fraught with difficulties. Quite often it requires some research on the appropriate forums before attempting to perform a recovery so this section does not cover such case.

Make the preparations described at the beginning of the previous section Recovering your system partition (p. 85). In case of upgrading the healthy system disk to a larger capacity new one, if you have not assigned unique names to the partitions on the system disk before making a system disk backup, it might make sense to assign such names and create a new backup of the entire disk. This will allow identifying the partitions by their names and not by the letters which may differ when booting from the rescue media. If you are recovering from a system disk drive failure, assign names now anyway. The names will help you find the drive containing your backups, as well as the target (new) drive.

The information on partition sizes, drive capacities, their manufacturers, and model numbers can also help in correctly identifying the drives.

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One more recommendation - it is highly recommended to install the new hard drive to the same position in the computer and use the same cable and the same connector as for the original drive (though this is not always possible, e.g. the old drive may be an IDE and the new drive may be a SATA). In any case, install the new drive to where it will be used.

10.2.1. Recovering a disk without a hidden partition

At first let's consider recovery of a system disk containing two partitions (none of them hidden) using a disk backup. In addition, we assume that the system disk does not contain a recovery partition which may not be hidden. If the disk contains, for example, three partitions, the procedure will be similar. We will describe recovery using the rescue media (as this approach usually gives the best recovery results).

Attach the external drive if it contains the backup archive to be used for recovery and make sure that the drive is powered on. This must be done before booting from Acronis rescue media.

1. Arrange the boot sequence in BIOS so as to make your rescue media device (CD, DVD or USB stick) the first boot device. See Arranging boot sequence in BIOS (p. 192).
2. Boot from the rescue media and select Acronis True Image Home (Full version).
3. Select **Recovery** → **Disk and Partition Recovery** in the main menu, then choose the image backup of your system disk that you want to use for recovery.

   If the disks have different disk letters in Windows and the recovery environment, the program will display the following error message: "Acronis True Image Home cannot detect volume N of "Name" archive", where Name is the name of the required image backup archive and volume number (N) may be different depending on the number of backups in the archive. Click **Browse** and show the path to the archive.
4. Select **Recover whole disks and partitions** at the Recovery method step.
5. At the **What to recover** step select the boxes of the partitions to be recovered. Do not select the **MBR and Track 0** box, as this will result in selecting the entire disk for recovery. Recovering the entire disk does not allow you to resize partitions manually. If necessary, you can recover the MBR later. Select the partitions and click **Next**.

   Selecting partitions leads to appearance of the relevant steps "Settings of partition ...". Take note that these steps are in ascending partition drive letter order and that this order cannot be changed. The order may differ from the physical order of the partitions on the hard disk. In the case being considered (no hidden or recovery partitions), the physical order of the partitions on the new disk does not have special importance as Acronis True Image Home automatically fixes the appropriate Windows loader files.

   Incidentally, this step allows you to find out whether the disk you are going to recover contains a hidden partition. Hidden partitions do not have disk letters and they go first in the "Settings of partition ..." steps. If you find a hidden partition, see Recovering a disk with a hidden partition (p. 88).
6. You can specify the following partition settings: location, type, and size. Most likely you will first specify the settings of the system partition as it usually has the letter C. Because you are recovering to the new disk, click **New location**. Select the destination disk by either its assigned name or capacity.

   If you have not assigned names to the disks and have any doubts when selecting the destination disk, you may abort the recovery by clicking **Cancel** and try to identify the target disk by its model number, interface, etc. To see this information, select **Tools & Utilities** → **Add New Disk** in the main menu and the **Disk selection** screen will show the information. Use it for identifying the

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destination disk number, then click **Cancel**, start the Recovery Wizard again, repeat the above steps, and select the destination disk.

7. Clicking **Accept** will return you to the "Settings of partition ..." screen. Check the partition type and change it, if necessary. You should remember that the system partition must be primary and marked as active.
8. Proceed to specifying the partition size by clicking **Change default** in the Partition size area. By default the partition will occupy the entire new disk. You can resize and relocate the partition by dragging it or its borders with a mouse on the horizontal bar on the screen or by entering corresponding values into the appropriate fields (Partition size, Free space before, Free space after). While specifying the partition size remember that you need to leave as much unallocated (free) space *after* the newly resized partition as will be needed for the second partition. Usually the free space *before* partitions is equal to zero. Click **Accept** when the partition has the size you have planned for it, then click **Next**.
9. Begin specifying the settings for the second partition. Click **New location**, then select unallocated space on the destination disk that will receive the second partition. Click **Accept**, check the partition type (change, if necessary) and then proceed to specifying the partition size which by default is equal to the original size. Usually there is no free space after the last partition, so allocate all the unallocated space to the second partition, click **Accept** and then click **Next**.
10. Carefully read the summary of operations to be performed. If you do not want to validate the backup, click **Proceed**, otherwise click **Options** and select the "Validate backup archive before recovery" box before clicking **Proceed**.
11. When the operation finishes, exit the standalone version of Acronis True Image Home.

Windows should not "see" both the new and old drive during the first boot after recovery. If you upgrade the old drive to a larger capacity new one, disconnect the old drive before the first boot otherwise there may be problems booting Windows.

Switch off the computer, if you need to disconnect the old drive, otherwise just reboot the computer after removing the rescue media.

Boot the computer to Windows. It may report that new hardware (hard drive) is found and Windows needs to reboot. After making sure that the system operates normally, restore the original boot sequence.

10.2.2. Recovering a disk with a hidden partition

Recovering a backup of the system disk with a hidden partition (e.g. created by the PC manufacturer for diagnostics or system recovery) to a different capacity hard drive, requires to take into account some additional factors. First of all, for the best chance of success, it is necessary to keep on the new drive the physical order of the partitions that exist on the old drive and place the hidden partition to the same location - usually at the start or the end of the disk space. In addition, it is better to recover the hidden partition without resizing to minimize the risk of possible problems.

So before proceeding with recovery, you need to know about all partitions existing on the system disk, their sizes, and physical order. To see this information, start Acronis True Image Home and choose **Recovery** → **Disk and Partition Recovery** in the main menu. Select a backup of your system disk and click **Details** on the toolbar. Acronis True Image Home will display information about the backed up disk, including a graphical view of all partitions the disk contains and their physical order on the disk. If any partition display is too small for accommodating the relevant information, hover the mouse pointer over the partition to see the information.

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Assuming that you have got the information, let's proceed with recovery of a system disk using the rescue media.

Attach the external drive if it contains the backup archive to be used for recovery and make sure that the drive is powered on. This must be done before booting from Acronis rescue media.

1. Arrange the boot sequence in BIOS so as to make your rescue media device (CD, DVD or USB stick) the first boot device. See Arranging boot sequence in BIOS (p. 192).
2. Boot from the rescue media and select Acronis True Image Home (Full version).
3. Select **Recovery** → **Disk and Partition Recovery** in the main menu and then choose the image backup of your system disk that you want to use for recovery.

   If the disks have different disk letters in Windows and the recovery environment, the program will display the following error message: "Acronis True Image Home cannot detect volume N of "Name" archive", where Name is the name of the required image backup archive and volume number (N) may be different depending on the number of backups in the archive.
4. Select **Recover whole disks and partitions** at the Recovery method step.
5. At the **What to recover** step select the boxes of the partitions to be recovered. Do not select the **MBR and Track 0** box, as this will result in selecting the entire disk for recovery. Recovering the entire disk does not allow you to resize partitions manually. You will recover the MBR later. Select the partitions and click **Next**.

   Selecting partitions leads to appearance of the relevant steps "Settings of partition ...". Take note that these steps start with partitions without an assigned disk letter (as usually is the case with hidden partitions), then go in ascending order of partition disk letters and this order cannot be changed. The order may differ from the physical order of the partitions on the hard disk.
6. You can specify the following partition settings: location, type, and size. You will first specify the settings of the hidden partition as it usually does not have a disk letter. Because you are recovering to the new disk, click **New location**. Select the destination disk by either its assigned name or capacity.

   If you have not assigned names to the disks and have any doubts when selecting the destination disk, you may abort the recovery by clicking **Cancel** and try to identify the target disk by its model number, interface, etc. To see this information, select **Tools & Utilities** → **Add New Disk** in the main menu and the **Disk selection** screen will show the information. Use it for identifying the destination disk number, then click **Cancel**, start the Recovery Wizard again, repeat the above actions, and select the destination disk.
7. Clicking **Accept** will return you to the "Settings of partition ..." screen. Check the partition type and change it, if necessary.
8. Proceed to specifying the partition size by clicking **Change default** in the Partition size area. By default the partition will occupy the entire new disk. You need to keep the hidden partition size unchanged, as well as place it to the same location on the disk (at the start or the end of disk space). To do this, resize and relocate the partition by dragging it or its borders with a mouse on the horizontal bar on the screen or by entering corresponding values into the appropriate fields (Partition size, Free space before, Free space after). Click **Accept** when the partition has the required size and location and then click **Next**.

   Specify the settings for the second partition which in this case is your system partition. Click **New location**, then select unallocated space on the destination disk that will receive the partition. Click **Accept**, check the partition type (change, if necessary). You should remember that the system partition must be primary and marked as active. Specify the partition size which by default equals

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the original size. Usually there is no free space after the partition, so allocate all the unallocated space on the new disk to the second partition, click Accept and then click Next.

9. Carefully read the summary of operations to be performed. If you do not want to validate the backup, click **Proceed**, otherwise click **Options** and select the "Validate backup archive before recovery" box before clicking **Proceed**.
10. When the operation finishes, proceed to MBR recovery. In this case you need to recover the MBR as the PC manufacturer could change the generic Windows MBR or a sector on the track 0 to provide access to the hidden partition.
11. Select the same backup once more, right-click and select Recover in the shortcut menu, choose **Recover whole disks and partitions** at the Recovery method step and then select the **MBR and Track 0** box.
12. At the next step select the destination disk as the target for MBR recovery, click **Next** and then **Proceed**. After MBR recovery is complete, exit the standalone version of Acronis True Image Home.

Windows should not "see" both the new and old drive during the first boot after recovery. If you upgrade the old drive to a larger capacity new one, disconnect the old drive before the first boot otherwise there may be problems booting Windows.

Switch off the computer, if you need to disconnect the old drive, otherwise just reboot the computer after removing the rescue media.

Boot the computer to Windows. It may report that new hardware (hard drive) is found and Windows needs to reboot. After making sure that the system operates normally, restore the original boot sequence.

10.3. Recovering a data partition or disk

As we already said, data partitions and disks are usually recovered in Windows because this allows you to avoid such issues as the program not detecting your hard drives, changing disk letters, etc. To reduce the risk of problems during recovery even more, validate the backup archive to be recovered and check the destination disk for errors using chkdsk.

Attach the external drive if it contains the backup archive to be used for recovery and make sure that the drive is powered on. This must be done before starting Acronis True Image Home.

1. Start Acronis True Image Home.
2. Select **Recovery** → **Disk and Partition Recovery** in the main menu, then choose the image backup containing the data partition you want to recover.
3. Select **Recover whole disks and partitions** at the Recovery method step.
4. As you are going to recover a data partition, there is no need to select the "Recover MBR and track 0" box at the **What to recover** step. Select just the data partition you want to recover.
5. The next step allows you to select settings for the partition to be recovered. When recovering the partition to the original location, you only need to check the settings. If you want to recover the partition to another location, select the new location and set the partition type you need (or leave the default setting). When the new location is an existing partition, usually you may leave its disk letter and size unchanged. When the new location is unallocated space e.g. after installing a new hard drive you intend to use for your data, specify the size of the new partition and assign a logical disk letter.

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6. Carefully read the Summary. After making sure that you have made the correct settings, click **Proceed**, if you do not need to change the default recovery options, otherwise click **Options**.
7. The Options step allows setting the recovery options, for example, to check the file system after recovery. For more information about the recovery options see Setting default recovery options (p. 101). After setting the recovery options click **Proceed**.

Recovering the entire data disk backup requires similar steps with few minor differences, for example, there is no "Check file system after recovery" option. When recovering to the original hard drive the steps of the Recovery Wizard are straightforward - just make sure that you select the disk with the same number as the backed up disk, as the destination.

Recovering your data disk backup to a hard drive with a different capacity has some nuances depending on its capacity and geometry (the number of heads and sectors per track). When recovering to a smaller capacity hard drive, the partition(s) size will be proportionally reduced. When recovering to a larger capacity hard drive, there are two cases: 1) if the hard drive has the same geometry, the backed up disk will be recovered "as is" thus leaving unallocated space; and 2) if the hard drive has different geometry, the partition(s) size will be proportionally enlarged.

10.4. Recovering files and folders

Depending on the backup types you have used, there may be several methods of recovering files and folders. In most cases you recover files and folders in Windows. You can recover files and folders from a file backup archive and from a disk/partition image as well. To recover files/folders from an image, you can mount the image (see Mounting an image (p. 139)) and copy files/folders to a desired location using Windows Explorer.

If you need to recover just a single file/folder or a few files, double-click on the required image backup archive. Then drill-down to the folder containing the file(s) you need to recover, select the file(s), right-click and choose **Copy** in the shortcut menu, open a folder for saving the files to be recovered, right-click in the folder and choose **Paste** in the shortcut menu. You can also drag the files from the backup archive into the destination folder. This method can also be used in case of My Data type backup archives.

One more method of recovering files/folders from an image is described below. See Recovering files and folders from image archives (p. 92).

10.4.1. Recovering files and folders from file archives

This section describes how to recover files and folders from a file backup archive.

1. Start the **Recovery Wizard** by selecting **Recovery** → **File Recovery** in the main program menu.
2. Select the archive.

   Data recovery directly from an FTP server requires the archive to consist of files of no more than 2GB. If you suspect that some of the files are larger, first copy the entire archive (along with the initial full backup) to a local hard disk or a network share disk. See notes and recommendations for supporting FTP servers in Supported storage media (p. 14).

   *****

   *Please note that before recovering Microsoft Outlook mail messages, accounts, contacts, settings, etc. from **My E-mail backup** on a new computer with a newly installed Microsoft Outlook, you should launch Outlook*

at least once. If Microsoft Outlook is launched for the first time after recovering the E-mail information, it may malfunction.

*If you use Microsoft Outlook Express and recover its mail folders, accounts, etc. from **My E-mail backup** on another PC or after performing a so called "clean install" of Microsoft Windows, please, do not forget to switch to your identity after recovery by selecting **File** → **Switch Identity** in Outlook Express and then double-clicking on your identity in the list of the dialog box.*

3. If you are going to recover files from an archive containing incremental backups, Acronis True Image Home will enable selecting one of the successive incremental backups by its creation date/time. Thus, you can roll back the files/folders state to a certain date.

   To recover data from an incremental backup, you must have all the previous backup files and the initial full backup. If any of the successive backups are missing, recovery is not possible.

   To recover data from a differential backup, you must have the initial full backup as well.

4. Select a folder on your computer where you want to recover selected files/folders (a target folder). You can recover data to its original location or choose a new one, if necessary. Choosing a new location results in appearance of one more required step, namely, **Destination**.

   When you choose a new location, by default the selected items will be recovered without recovering the original, absolute path. You may also wish to recover the items with their entire folder hierarchy. If this is the case, select **Recover absolute path**.

   At the **Destination** step select a new location on the directory tree. You can create a new folder for the files to be recovered to by clicking **Create new folder**.

5. At the **What to recove**r step select the files and folders to recover. You can choose to recover all data or browse the archive contents and select the desired folders or files. Clicking **Next** will bring you to the **Finish** step. Click **Proceed** if you do not need to change the default recovery options, otherwise click **Options**.

6. The first optional step allows you to keep useful data changes made since the selected backup was created. Choose what to do if the program finds in the destination folder a file with the same name as in the archive. By default, the program will overwrite existing files and folders, though more recent files and folders are protected from overwriting. If necessary, you can protect the system, hidden files and folders from being overwritten by selecting the appropriate check boxes.

   In addition, you can protect the files that meet the criteria you specify in this window from being overwritten.

   Unselecting the **Overwrite existing files** check box will give the files on the hard disk unconditional priority over the archived files.

7. Select the options for the recovery process (that is, recovery process priority, file-level security settings, etc.). The options you set on this page will be applied only to the current recovery task.

8. Up to this point, you can make changes in the created task by choosing the step you want to change and editing its settings. Clicking **Proceed** will launch the task execution.

9. The task progress will be shown in a special window. You can stop the procedure by clicking **Cancel**. Please keep in mind that the aborted procedure may still cause changes in the destination folder.

10.4.2. Recovering files and folders from image archives

Image archives provide recovery of not only entire disks/partitions, but files/folders too.

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1. Start the **Recovery Wizard** by selecting **Recovery** → **Disk and Partition Recovery** in the main program menu.
2. Select the archive.

   Data recovery directly from an FTP server requires the archive to consist of files of no more than 2GB. If you suspect that some of the files are larger, first copy the entire archive (along with the initial full backup) to a local hard disk or a network share disk. See notes and recommendations for supporting FTP servers in Supported storage media (p. 14).

3. If you are going to recover files from an archive containing incremental backups, Acronis True Image Home will enable selecting one of the successive incremental backups by its creation date/time. Thus, you can roll back the file/folder state to a certain date.

   To recover data from an incremental backup, you must have all the previous backup files and the initial full backup. If any of the successive backups are missing, recovery is not possible.

   To recover data from a differential backup, you must have the initial full backup as well.

4. At the **Recovery method** step select **Recover chosen files and folders**.
5. Select where you want to recover the chosen files/folders. You can recover data to its original location or choose a new one, if necessary.

   *When recovering files/folders under bootable rescue media, the **Original location** option is disabled, because drive letters in standalone Acronis True Image Home might differ from the way Windows identifies drives.*

   Choosing a new location results in appearance of one more required step, namely, **Destination**. When you choose a new location, by default the selected items will be recovered without recovering the original, absolute path. You may also wish to recover the items with their entire folder hierarchy. If this is the case, select **Recover absolute path**.

   At the **Destination** step select a new location on the directory tree. You can create a new folder for the files to be recovered by clicking **Create new folder**.
6. Select the files and folders to recover. Make sure that you unselect all unnecessary folders. Otherwise you will recover a lot of excess files.
7. The first optional step allows you to keep useful data changes made since the selected backup was created. Choose what to do if the program finds a file in the destination folder with the same name as in the archive. By default, the program will overwrite existing files and folders, though more recent files and folders are protected from being overwritten. If necessary, you can protect the system, hidden files and folders from being overwritten by selecting the appropriate check boxes.

   In addition, you can protect the files that meet the criteria you specify in this window from being overwritten.

   Unselecting the **Overwrite existing files** checkbox will give the files on the hard disk unconditional priority over the archived files.
8. Select the options for the recovery process (that is, recovery process priority, file-level security settings, etc.). The options you set on this page will be applied only to the current recovery task.
9. Up to this point, you can make changes in the created task by choosing the step you want to change and editing its settings. Clicking **Proceed** will launch the task execution.
10. The task progress will be shown in a special window. You can stop the procedure by clicking **Cancel**. Please keep in mind that the aborted procedure may still cause changes in the destination folder(s).

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11. Additional recovery information

11.1. Recovery Wizard - detailed information

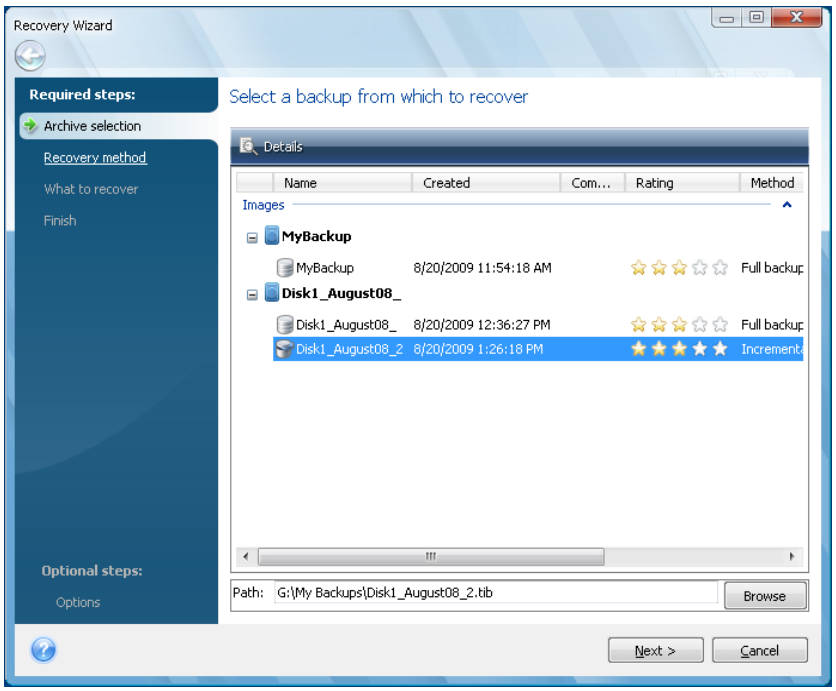
The below description of the Recovery Wizard refers to recovering partitions/disks from image backups. If you need to recover files and folders, see Recovering files and folders (p. 91).

11.1.1. Starting the Recovery Wizard

Start the **Recovery Wizard** by selecting **Recovery** → **Disk and Partition Recovery** in the main program menu.

11.1.2. Archive selection

1. Select the archive. Acronis True Image Home will show the list of backup archives whose locations it knows from the information stored in its database. If the program has not found the backup you need (for example, when the backup was made some time ago by a previous Acronis True Image Home version), you can find it manually by clicking **Browse** and then selecting the backup location on the directory tree and choosing the backup in the right pane.



If the archive is located on removable media, e.g. CD, first insert the last CD and then insert disks in reverse order when the Recovery Wizard prompts you.

***

Data recovery directly from an FTP server requires the archive to consist of files of no more than 2GB each. If you suspect that some of the files are larger, first copy the entire archive (along with the initial full backup) to a local hard disk or network share disk. See notes and recommendations for supporting FTP servers in Supported storage media (p. 14).

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When recovering a backup of Windows Vista system disk containing restore points, some of your restore points (or all of them) may be missing if you boot from the recovered system disk and open the System Restore tool.

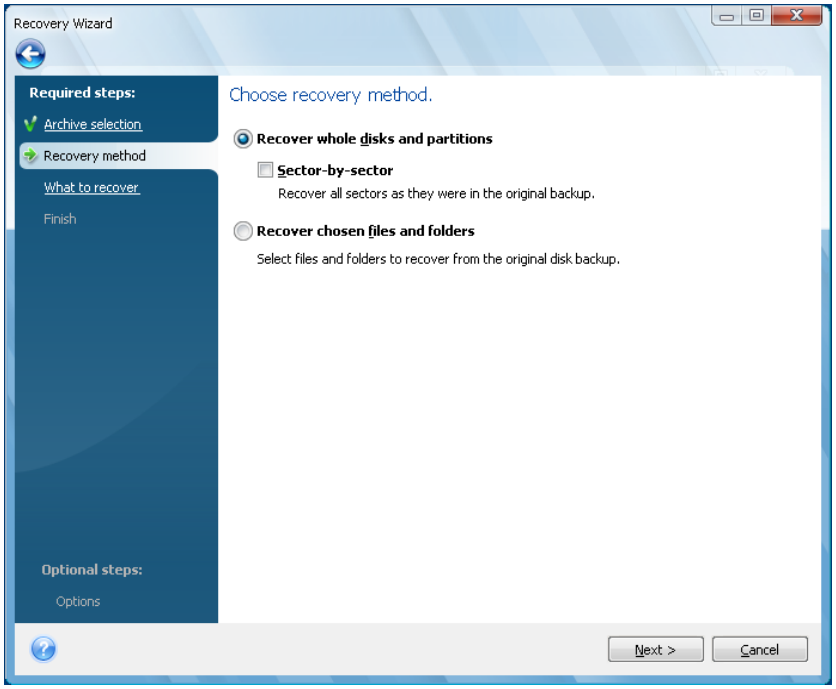
If the archive is password-protected, Acronis True Image Home will ask for it. The partitions layout and the **Next** button will be unavailable until you enter the correct password.

2. If you are going to recover data from an archive containing incremental backups, Acronis True Image Home will enable selecting one of the successive incremental backups by its creation date/time. Thus, you can roll back the disk/partition state to a certain date.

To recover data from an incremental backup, you must have all previous backup files and the initial full backup. If any of the successive backups are missing, recovery is not possible. To recover data from a differential backup, you must have the initial full backup as well.

11.1.3. Recovery method selection

Select what you want to recover:



Recover whole disks and partitions

Having chosen a disk and partition recovery type, you may need to select the following option.

Sector-by-sector

The program will recover both used and unused sectors of disks or partitions. This option will appear only when you choose to recover a sector-by-sector backup.

Change size of disk or partition (for advanced users)

This box will appear only when you choose to recover a backup from CD/DVDs. By default the box is unchecked and partition(s) will be recovered "as is". This allows you to reduce the amount of disc swapping while recovering a partition when a backup archive spans several CD/DVDs. Selecting this

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box when you need to resize a partition or disk greatly increases the amount of disc swapping, so we recommend to copy all CD/DVDs to a folder on a hard disk and recover from this folder.

Use Acronis Universal Restore

Using Universal Restore (provided by separately purchased Acronis Plus Pack) allows recovering an image of your system partition on a computer with dissimilar hardware.

Recover chosen files and folders

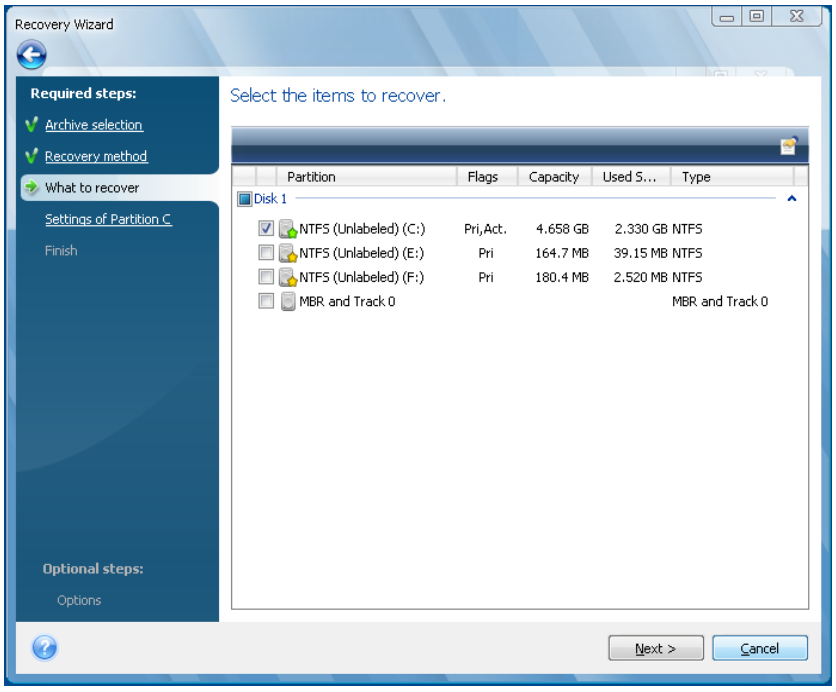
If you are not going to recover the system, but only want to repair damaged files, select **Recover chosen files and folders**.

You can recover files from disk/partition images only if they have the FAT or NTFS file systems.

11.1.4. Selecting a disk/partition to recover

The selected archive file can contain images of several partitions or even disks. Select which disk/partition to recover.

During a single session, you can recover several partitions or disks, one by one, by selecting one disk and setting its parameters first and then repeating these actions for every partition or disk to be recovered.



Disk and partition images contain a copy of track 0 along with the MBR (master boot record). It appears in this window in a separate line. You can choose whether to recover the MBR and track 0 by selecting the corresponding box. Recover the MBR if it is critical to your system booting.

When MBR recovery is chosen, the "Recover disk signature" box will appear in the bottom left corner at the next step. Recovering disk signature may be desirable due to the following reasons:

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1. Acronis True Image Home creates scheduled tasks using the signature of the source hard disk. If you recover the same disk signature, you don't need to re-create or edit the tasks created previously.
2. Some installed applications use disk signature for licensing and other purposes.
3. If you use Windows Restore Points, they will be lost when the disk signature is not recovered.
4. In addition, recovering disk signature allows to recover VSS snapshots used by Windows Vista's "Previous Versions" feature.

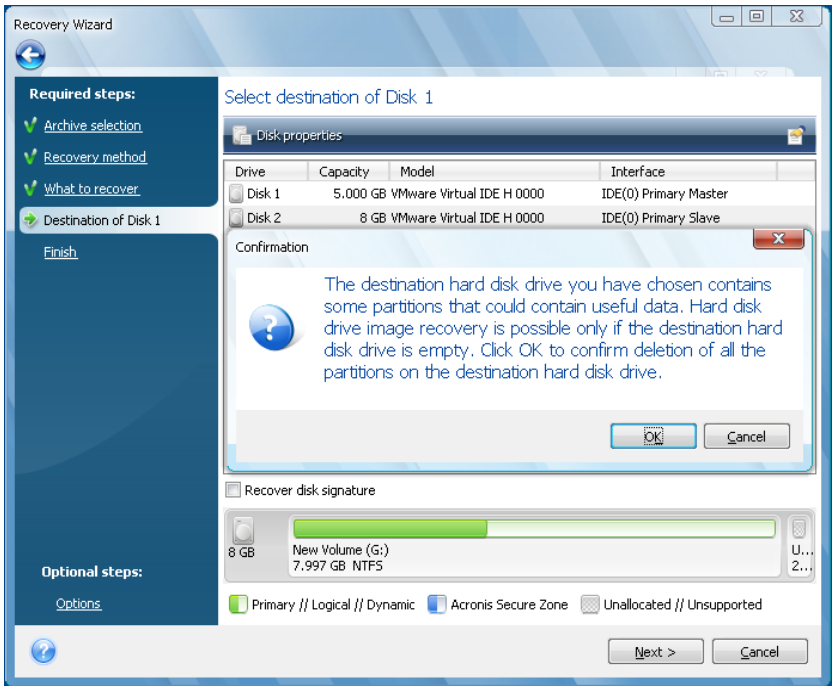
If the box is unselected, Acronis True Image Home generates a new disk signature for the recovered drive. This may be needed when you use an image backup not for disaster recovery but for cloning your Windows Vista hard drive to another one. Trying to boot Windows after cloning with both drives connected will result in a problem. During Windows booting, its loader checks the disk signatures of all the connected drives, and if it finds two identical disk signatures, the loader changes the signature of the second disk, which would be the clone disk. Once this happens, the clone disk would not be able to boot up independently of the original disk, because the MountedDevices fields in the clone's registry reference the disk signature of the original disk, which will not be available if the original disk is disconnected.

11.1.5. Selecting a target disk/partition

1. Select a target disk or partition where you want to recover the selected image. You can recover data to its initial location, to another disk/partition or to an unallocated space. The target partition should be at least the same size as the uncompressed image data.

   All the data stored on the target partition will be replaced by the image data, so be careful and watch for non-backed-up data that you might need.

2. When recovering an entire disk, the program will analyze the target disk structure to see whether the disk is free.



If there are partitions on the target disk, you will be prompted by the confirmation window stating that the destination disk contains partitions, perhaps with useful data.

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You will have to select between:

- **OK** – all existing partitions will be deleted and all their data will be lost.
- **Cancel** – no existing partition will be deleted, discontinuing the recovery operation. You will then have to cancel the operation or select another disk.

*Note that no real changes or data destruction will be performed at this time! For now, the program will just map out the procedure. All changes will be implemented only when you click **Proceed** in the wizard's **Summary** window.*

11.1.6. Changing the recovered partition type

When recovering a partition, you can change its type, though it is not required in most cases.

To illustrate why you might need to do this, let's imagine that both the operating system and data were stored on the same primary partition on a damaged disk.

If you are recovering a system partition to the new (or the same) disk and want to load the operating system from it, you will select **Active**.

Acronis True Image Home automatically corrects boot information during recovery of the system partition to make it bootable, even if it was not recovered to the original partition (or disk).

If you recover a system partition to another hard disk with its own partitions and OS, most likely you will need only the data. In this case, you can recover the partition as **Logical** to access the data only.

By default, the original partition type is selected.

*Selecting **Active** for a partition without an installed operating system could prevent your computer from booting.*

11.1.7. Changing the recovered partition size and location

You can resize and relocate a partition by dragging it or its borders with a mouse on the horizontal bar on the screen or by entering corresponding values into the appropriate fields.

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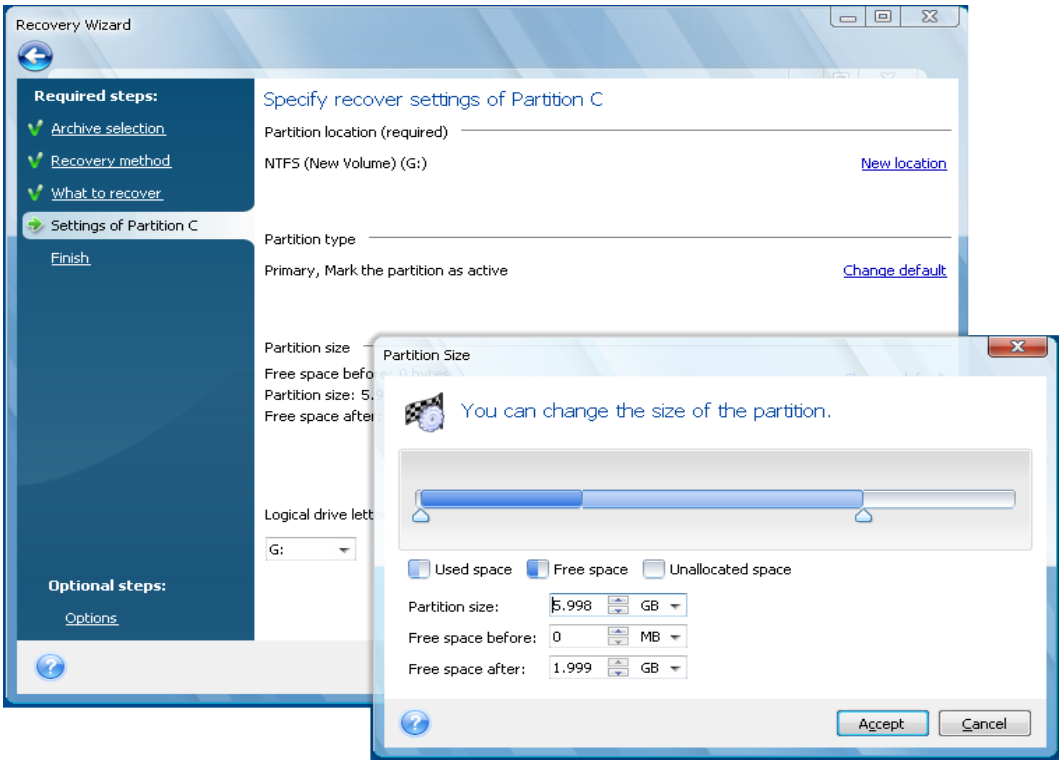
Using this feature, you can redistribute the disk space among partitions being recovered. In this case, you will have to recover the partition to be reduced first.



These changes might be useful if you are going to copy your hard disk to a new high-capacity one by creating its image and recovering it to a new disk with larger partitions.

11.1.8. Assigning a letter to the recovered partition

Acronis True Image Home will assign an unused letter to a recovered partition. You can select the desired letter from a drop-down list or let the program assign a letter automatically by selecting the **Auto** setting.

You should not assign letters to partitions inaccessible to Windows, such as to those other than FAT and NTFS.

11.1.9. Setting recovery options

Clicking **Options** at the **Finish** step allows selecting the options for the recovery process (that is, recovery process priority, etc.). The settings will be applied only to the current recovery task. Or, you can edit the default options. See Setting default recovery options (p. 101) for more information.

11.1.10. Executing recovery

Up to this point, you can make changes in the created task by choosing the step you want to change and editing its settings. If you click **Cancel**, no changes will be made to the disk(s). Clicking **Proceed** will launch the task execution.

The task progress will be shown in a special window. You can stop the procedure by clicking **Cancel**. However, it is critical to note that the target partition will be deleted and its space unallocated – the

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same result you will get if the recovery is unsuccessful. To recover the "lost" partition, you will have to recover it from the image again.

11.2. Setting default recovery options

To set the recovery options to be used by default during any data recovery, select **Tools & Utilities** → **Options** → **Recovery options**. You can always restore the default recovery options to the values preset during installation of Acronis True Image Home. To do this, click **Reset the current to default** on the toolbar of the **Options** window. To reset just a single recovery option, select it on the left pane and click **Reset the current to default**.

*Clicking **Reset all to default** will reset all the default options (for backup/recovery, notifications, etc.) to their preset values, so this button should be used with caution.*

11.2.1. File recovery options

- **Recover files with their original security settings**.

  The preset is **enabled**.

  If the file security settings were preserved during backup (see File-level security settings (p. 79)), you can choose whether to restore them or let the files inherit the security settings of the folder where they will be recovered.

  This option is effective only when recovering files from file/folder archives.

- **Set current date and time for recovered files**

  The preset is **disabled**.

  You can choose whether to recover the file date and time from the archive or assign the files the current date and time. By default the file date and time from the archive will be assigned.

- **Validate backup archive before recovery**

  The preset is **disabled**.

  Before data is recovered from the archive, Acronis True Image Home can check its integrity. If you suspect that the archive might have been corrupted, enable this option.

- **Check the file system after recovery**

  The preset is **disabled**.

  Having recovered a partition from an image, Acronis True Image Home can check the integrity of the file system. To do so, enable this option.

Limitations on use of this option:

- Check of the file system is available only when recovering partitions using FAT16/32 and NTFS file systems.
- The file system will not be checked if a reboot is required during recovery, for example, when recovering the system partition to its original place.

11.2.2. Overwrite file options

This option is not applicable to recovery of disks and partitions from images.

By default, the program will overwrite existing files and folders, though more recent files and folders are protected from overwriting.

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You can set default filters for the specific types of files you wish to preserve during archive recovery. For example, you may want hidden and system files and folders, newer files and folders, as well as files matching selected criteria not to be overwritten by the archive files.

While specifying the criteria, you can use the common Windows wildcard characters. For example, to preserve all files with extension .exe, add ***.exe**. **My???.exe** will preserve all .exe files with names consisting of five symbols and starting with "my".

Unselecting the **Overwrite existing files** check box will give the files on the hard disk unconditional priority over the archived files.

11.2.3. Pre/post commands

You can specify commands or batch files to be automatically executed before and after the recovery procedure. Click **Edit** to open the **Edit Command** window where you can easily input the command, its arguments and working directory or browse folders to find a batch file.

Please note that interactive commands, i.e. commands that require user input, are not supported.

Unselecting the **Do not perform operations until the command's execution is complete** box, selected by default, will permit the recovery procedure to run concurrently with your command execution.

If you want the recovery to be performed even if your command fails, uncheck the **Abort the operation if the user command fails** box (checked by default).

You can test execution of the command you created by clicking the **Test command** button.

Please keep in mind that when recovering the system partition to the original place your post command will not be executed because recovery of the system partition requires a reboot, resulting in loss of the command. Such a command will also be lost if the program requests a reboot during any other recovery operation.

11.2.4. Recovery priority

The preset is **Low**.

The priority of any process running in a system determines the amount of CPU usage and system resources allocated to that process. Decreasing the recovery priority will free more resources for other CPU tasks. Raising recovery priority may speed up the recovery process as it takes resources from other currently running processes. The effect will depend on total CPU usage and other factors.

11.3. Detailed information on recovery operations involving dynamic/GPT disks and volumes

The below information is intended for helping you with recovery operations involving dynamic/GPT disks and volumes. There may be various situations, for example, where you may use both basic and dynamic disks in your computer. Similarly, you may use disks with both MBR and GPT partition schemes at the same time.

1) Acronis True Image Home supports recovery of dynamic volumes to the following locations on the local hard drives:

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- to the original location (to the same dynamic volume)
- to another dynamic disk or volume
- to unallocated space of the dynamic group
- to a basic disk

If a dynamic volume is recovered to unallocated space of the dynamic group, the type of the recovered volume will be the same as it was in the archive.

Manual resizing of dynamic volumes during recovery to dynamic disks is not supported. If you need to resize a dynamic volume during recovery, it should be recovered to a basic disk.

When performing a so called "bare-metal recovery" of dynamic volume(s) to a new unformatted disk the recovered volumes become basic. If you want the recovered volumes to remain dynamic, prior to recovery the target disk(s) should be prepared (partitioned and formatted) using third-party tools, for example, Windows Disk Management snap-in.

2) The target disk's partitioning scheme remains unchanged after recovery:

- if a GPT disk image is recovered over a GPT disk; the target disk remains a GPT disk
- if a GPT disk image is recovered over an MBR disk; the target disk remains an MBR disk
- if an MBR disk image is recovered over an MBR disk; the target disk remains an MBR disk
- if an MBR disk image is recovered over a GPT disk; the target disk remains a GPT disk

Recovery to unallocated space of a GPT disk is not supported.

3) The target volume type does not change when recovering over an existing volume. Examples:

- When a dynamic volume is recovered over a basic volume the target volume remains basic
- When a dynamic spanned volume is recovered over a dynamic striped volume the target volume remains striped

11.4. Using Acronis Universal Restore

Using Acronis Universal Restore (provided by separately purchased Acronis Plus Pack) will help you create a bootable system clone on different hardware (for more information see Acronis Universal Restore (p. 25)). Choose this option when restoring your system disk to a computer with a dissimilar processor, different motherboard or a different mass storage device than in the system you originally backed up. This may come in handy, for example, after replacing the failed motherboard or when deciding to migrate from a desktop to a laptop. You can use Acronis Universal Restore for restoring your system disk both from tib and vhd files. In most cases you will need to use bootable rescue media.

Acronis Universal Restore is unavailable when recovering the system partition from an Acronis Nonstop Backup archive.

To restore your system with the help of Acronis Universal Restore:

1. Make your rescue media the first boot device in BIOS. See Arranging boot sequence in BIOS (p. 192).
2. Boot from the rescue media and select Acronis True Image Home (Full version).

3. Click the **My Disks** link below **Recover** on the Welcome screen to start the Recovery Wizard and then choose the image of the system disk for recovery. As drive letters in the standalone Acronis True Image Home may differ from the way Windows identifies drives, you may need to specify the path to the image file by clicking **Browse** and selecting the disk and folder that stores the image.
4. Choose **Recover whole disks and partitions** and select the **Use Acronis Universal Restore** box.
5. If the target hardware has a specific mass storage controller (such as an SCSI, RAID, or Fibre Channel adapter) for the hard disk(s), specify where to find the driver(s) for the specific hardware at the **Drivers manager** step. If the driver(s) is stored on a diskette or CD, select the **Search removable media for device drivers** box. If some drivers are stored on a local hard disk or a network share, select the **Search for device drivers in the following locations** box (when it is not selected by default), and specify the path to the driver(s) after clicking **Add Search Path**.

   When the both boxes are selected at this step, Acronis Universal Restore will use three sources for drivers:

   - the removable media;

   - the drivers storage folder(s) specified at this step; and

   - the Windows default driver storage folders (in the image being restored).

   The program will find the most suitable of all available drivers and install them into the restored system.
6. At the **What to recover** step select the system partition, then specify the settings for the target partition (new system partition). Make sure that the partition type is primary and active. Usually you do not need to change the partition size which will be assigned automatically.
7. Carefully read the summary of operations at the **Finish** step. If you do not want to validate the backup, click **Proceed**, otherwise click **Options** on the sidevar and select the "Validate backup archive before recovery" box before clicking **Proceed**.

During restore the program may be unable to find some driver(s) in the specified folders and display an error message(s). In such case you can click **Ignore** to continue restoration or **Cancel** to cancel the process, then try to find the required driver and repeat restore.

After successfully restoring the system partition, exit Acronis True Image Home, enter the BIOS, make the system hard disk the first boot device and boot to the restored Windows.

During the first booting Windows will display numerous "Found new hardware" pop-up messages and will then ask you to reboot the computer.

If you use Acronis Universal Restore for restoring a backup of multiboot configuration with two or more editions of Windows, the most critical drivers will be replaced for all Windows installations.

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12. Try&Decide

The Try&Decide feature allows creating a secure, controlled temporary workspace on your computer without requiring you to install special virtualization software. You can perform various system operations not worrying that you might damage your operating system, programs or data.

After making virtual changes, you may apply them to your original system. If you make changes that you want to keep, you might want to commit those changes to the system. Among the operations you may attempt with this feature is to open mail attachments from unknown senders or visit Web sites that might contain potentially troublesome content.

For example, if you visit a Web site or open an E-mail attachment that puts a virus on your temporary duplicate, you can simply destroy the duplicate and no harm will be done – the virus will not appear on your machine.

It is important to remember that if you download E-mail from a POP mail server, create new files or edit existing documents while in the Try&Decide mode and then decide to discard your changes, those files, document changes, and mail will no longer exist. If you use POP E-mail, make sure to change the settings in your E-mail client to leave your mail on the server before *you activate the Try&Decide mode. This way, you can always retrieve your E-mail again. Similarly, save new files and/or edited documents to a drive not protected by Try&Decide.*

After starting Try&Decide mode you can safely install any system updates, drivers and applications without worrying about what might happen to your system. If anything goes wrong, you can simply discard the changes made in the Try&Decide mode.

One of the best features of Try&Decide is that it isolates your "real" operating system from changes to the temporary operating system duplicate made by updates. Should you find any kind of incompatibility, you can easily revert your system to the initial state, which was not changed when the update was applied.

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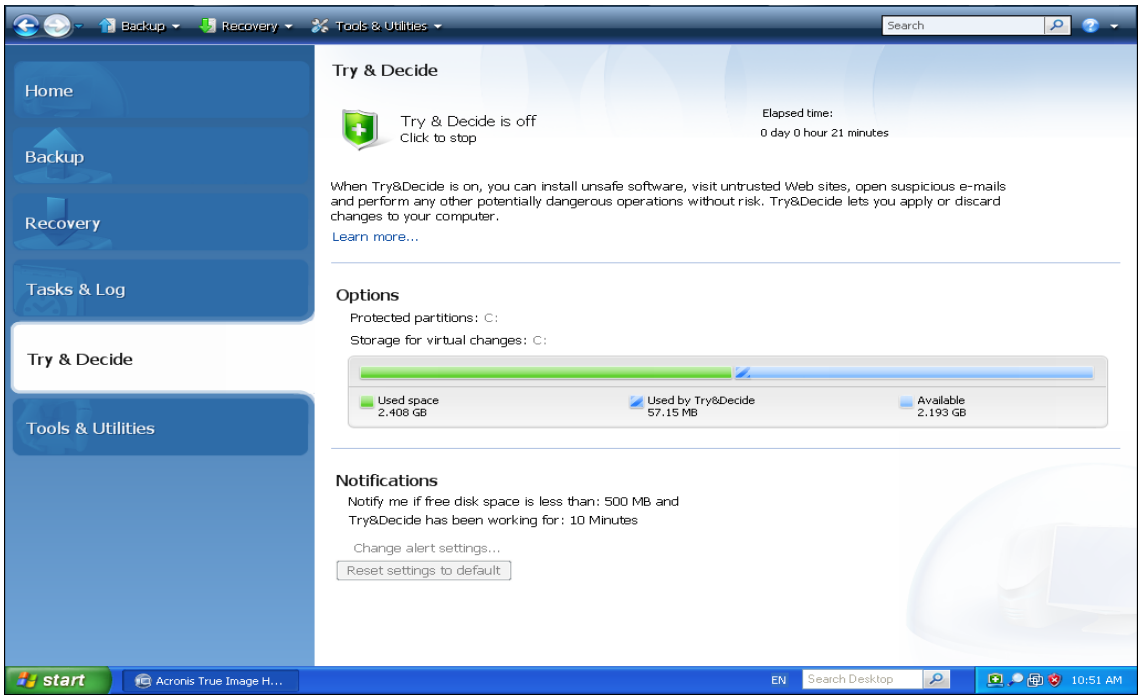
Because of this, you can safely install system updates when they appear. When Windows Update informs you that updates for the system and Microsoft applications are ready for installing, turn on the Try&Decide mode and then proceed to install the updates. If you encounter any sort of problem, discard the changes and leave your real operating system and applications untouched.



You can leave the Try&Decide mode turned on as long as you like (maybe days on end, however in such case applying changes may take a long time), since this mode "survives" across reboots of your operating system.

If you use Windows Vista or Windows 7, please, be aware that in the Try&Decide mode the program may use free disk space quite intensively, even when your computer is idle. This is due to housekeeping activities such as indexing that run in the background.

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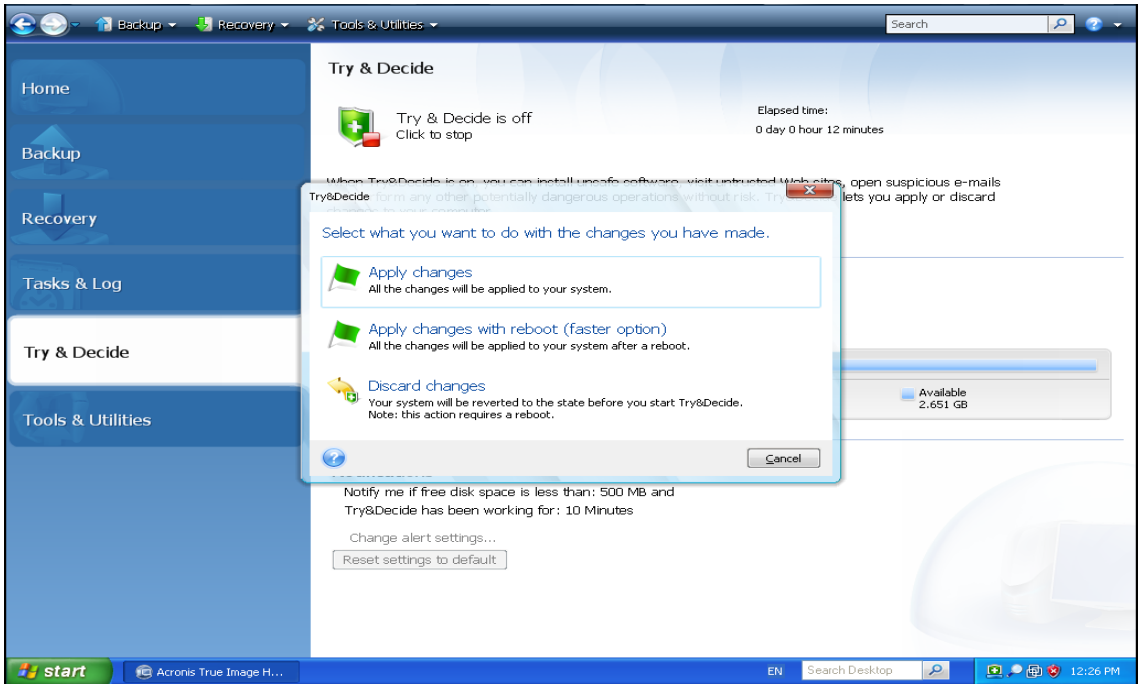
When your computer reboots for whatever reason while working in the Try&Decide mode, before booting of the operating system starts, you will be shown a dialog offering you two choices – stop the mode and discard changes or continue working in the mode. This will allow you to discard the changes that have resulted in a system crash. On the other hand, if you reboot, for example, after installing an application, you can continue working in the Try&Decide mode after starting Windows.

Continue in the mode
Start Windows and continue working in the Try mode.
Stop and discard
Stop the Try mode and discard all changes that have been made since
Acronis®
Try & Decide™
Turn Off Computer
Continue Windows booting in 6 seconds...
EN

The moment comes eventually when you decide to turn the mode off by clicking the **Stop** button. After clicking the button, the program will show a dialog where you should decide what to do with the changes to your system made in the Try&Decide mode - apply or discard:



- **Apply changes** will allow you to keep the changes made to the system
- **Apply changes with reboot** will speed up applying the changes. They will be applied after rebooting your computer
- **Discard changes** will return your system to the state it was in before turning on the Try&Decide mode

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Please note that while working in the Try&Decide mode you will experience slowing down of the system performance. Furthermore, the process of applying changes could take considerable time.

*****

Please be aware that Try&Decide cannot track changes in disk partitions, so you will be unable to use the Try&Decide mode for virtual operations with partitions such as resizing partitions or changing their layout. In addition, you must not use the Try&Decide mode and disk defragmentation or disk error checking utilities simultaneously, because this can irreparably corrupt the file system, as well as make the system disk unbootable.

*****

Acronis True Image Home will track changes until the disk space on the location selected for storing virtual changes is almost full. Then the program will alert you that the time has come to make a decision on whether to apply or discard the changes made so far. If you choose to not heed the alert message, the program will automatically restart the system when the disk is full, discarding the changes in the process of rebooting. At that point, all changes will be lost.

*****

When the Try&Decide mode is started, you won't be able to use the previously activated Acronis Startup Recovery Manager. When you stop the Try&Decide mode and apply or discard changes, the previously activated Acronis Startup Recovery Manager remains activated, but you will not be able to use it by pressing the F11 key. To use the F11 key, deactivate Acronis Startup Recovery Manager and then activate it once more.

*****

If you have chosen **Discard Changes** and rebooted the computer with multiple operating systems installed, you won't be able to boot other operating systems, except the one used for working in the Try&Decide mode. The second reboot will restore the original MBR and make other operating systems bootable.

12.1. Using Try&Decide

Now let's see how to use this feature. First of all, you should decide for yourself which part of your system you want to protect and set the Try&Decide options accordingly. Those options also provide other settings for the Try&Decide mode.

12.1.1. Try&Decide options and notifications

You can configure the Try&Decide options as required.

- **Protected partitions:** specify the partitions you want to protect from unauthorized changes during a Try&Decide session. By default, T&D protects the system partition (Disk C), though you may add other partitions or disks in your system.
- **Storage for virtual changes:** specify where Try&Decide will store information about virtual changes to your system. By default, T&D saves the information to a free space on Disk C. You can also choose as such place Acronis Secure Zone or another logical disk or hard drive.

  When choosing to protect more than one partition, you cannot select one of the partitions to be protected to store virtual changes. In addition, you cannot select an external hard disk drive.

- **Notifications** – specify whether Try&Decide should alert you when it uses up all the space allotted for saving virtual changes and after a specified time period has passed. By default all notifications are **On**. To change the default settings, click **Change alert settings...**

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You can always restore the default settings for the Try&Decide options by clicking **Reset settings to default**.

12.2. Try&Decide usage examples

The Try&Decide feature can help you in a variety of ways; here are some examples:

There are cases when the installation of antivirus software cripples the functionality of some applications; in fact, some programs might even refuse to start after antivirus installation. The Try&Decide feature can help you to avoid such problem. Here's how:

1. Select an antivirus program and download a trial version.
2. Turn on the Try&Decide mode.
3. Install the antivirus software.
4. Try to work with the applications installed on your computer performing your usual tasks.
5. If everything works without any snags, you can be reasonably sure that there will be no incompatibility problems and can buy the antivirus software.
6. If you encounter any problems, discard the changes in your system and try antivirus software from another vendor. The new attempt might turn out to be successful.

Here's another example: You have accidentally deleted some files and then emptied the Recycle Bin. Then you have remembered that the deleted files contained important data and now you are going to try to undelete them using an undelete software program. However, sometimes you may do something wrong while trying to recover deleted files, making things worse than before trying to recover them. Here's one way you could try to recover the lost files:

1. Turn on the Try&Decide mode.
2. Launch the file undelete utility.
3. After the utility scans your disk in search of the deleted file or folder entries, it will present you the deleted entries it has found (if any) and offer you the opportunity to save whatever it is able to recover. There is always a chance that you might pick the wrong file and while recovering it the utility may overwrite the very file you are trying to recover. If not for Try&Decide, this error would be fatal and the file would be lost irretrievably.
4. But now you can simply discard the changes made in the Try&Decide mode and make one more attempt to recover the files after turning on the Try&Decide mode again. Such attempts can be repeated until you recover the files or until you are sure that you have done your best to recover them.

One more benefit of the Try&Decide feature. Now you can let your children use your computer without worrying that they may inadvertently harm the operating system or mess up your business documents.

We assume that your kid has the Limited user account.

1. Turn on the Try&Decide mode. Making any changes to the Try&Decide options or turning off the Try&Decide mode will require administrator authority.
2. Log off and then log on using your kid's account.
3. Let your kid use the computer. When your kid is through with gaming or Internet surfing or when you think that it is time for the them to go to bed, return the system to the state it was in before

they started using the computer. To do so, log on and discard the changes made during the Try&Decide session.

It is well known that the "Add or Remove Programs" component of the Windows Control Panel cannot give a complete guarantee of cleanly uninstalling applications. This is because most applications do not provide enough information for it to be able to uninstall them without a trace. So almost every time you install a trial program and then remove it, you have some garbage left on your computer and after a while Windows may get slower. Even use of special uninstaller utilities cannot guarantee complete uninstallation. The Try&Decide feature, however, will ensure complete and perfect uninstallation of any software quickly and easily. Here's how:

1. Turn on the Try&Decide mode.
2. Install the software application you want to evaluate.
3. Try using the application.
4. When you want to uninstall it, just discard all the changes made to your computer in the Try&Decide mode.

This may come in handy not only for those who, for example, like to play a lot of games but for professional software testers as well – to use on their testing machines.

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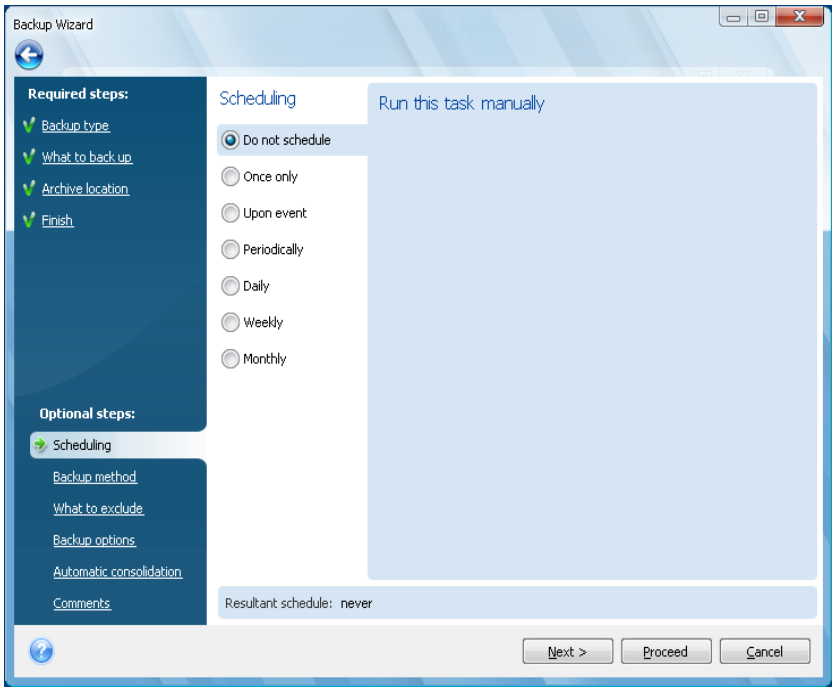
13. Scheduling tasks

13.1. Creating scheduled tasks

You can schedule a new task in the **Backup Wizard** or **Validate Wizard** in the **Scheduling** step. It is also possible to create a scheduled task by clicking **Create Backup Task** or **Create Validation Task** on the toolbar of the **Tasks and Log** screen.

If the backup archive you want to validate is password-protected , Acronis True Image Home will ask for it.

1. Perform task running scheduling. Select one of the following scheduling options:



- **Once only** – the task will be executed once at the specified time and day
- **Upon event** – the task will be executed upon an event to be selected in the right pane:
- **Periodically** – the task will be executed periodically with a frequency to be specified in the **Run this task periodically** pane, where you specify the time between runs for the task being scheduled.
- **Daily** – the task will be executed once a day or once every several days
- **Weekly** – the task will be executed once a week or once every several weeks on the selected day
- **Monthly** – the task will be executed once a month on the selected day

  To postpone a scheduled task until the next time the computer is idle, select the **Run the task only when the computer is idle** box. The task will automatically start when the computer is idle (you are not using the mouse and the keyboard) for the number of minutes specified in the **Wait** setting of the screen saver. Once the task has started, it will be completed because task execution cannot be interrupted by the user. However, you can work on the computer while the task is running.

  If the computer is off when the scheduled time comes, the task won't be performed, but you can force the missed task to run at the next system startup by selecting the **If missed, run the task at startup** box.

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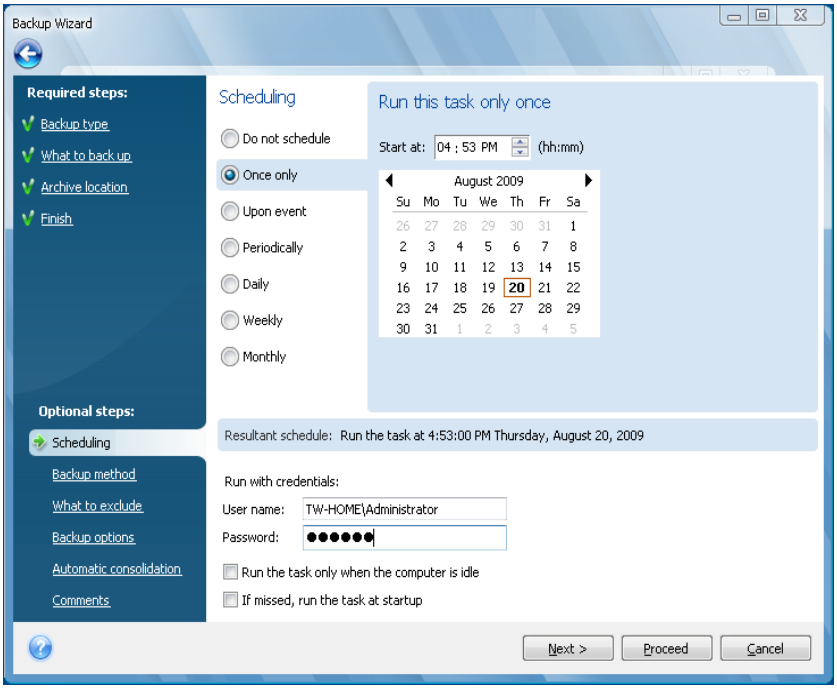
If you schedule a task for performing backup to a USB flash drive, two more check boxes appear on the scheduling screen – **If missed, run the task when device is attached** and **Run task only if the current device is attached**. Selecting the first box will let you perform a missed backup when the USB flash drive is attached if it was disconnected at the scheduled time. If you want the missed task to be performed only when the same device is attached, also select the **Run task only if the current device is attached** box. Otherwise the missed task will run when any USB flash drive is attached.

1. Specify the task start time and other schedule parameters, according to the selected periodicity. For most scheduled tasks (except for those scheduled to run "Once only") you can select the **Start date** box and set the date when the task will run for the first time. This may be useful when implementing a specific backup scenario. For example, see Full + incremental/differential backups with automatic rotation (p. 119).
2. Next you will have to specify the name of the user who owns the task to be executed; otherwise no scheduled execution will be available.
3. Enter the username (or leave the name of the logged on user). Enter the password.

13.1.1. Setting up once only execution

If you choose once only execution, set the start time. Then set the date on which to execute the task using the provided calendar:



13.1.2. Setting up upon event execution

If you choose the upon event execution option, set the event upon which to execute the task:

- **System startup** – the task will be executed at every OS startup
- **System shutdown** – the task will be executed before every system shutdown or reboot
- **User logon** – the task will be executed each time the current user logs on to the OS
- **User logoff** – the task will be executed each time the current user logs off the OS.

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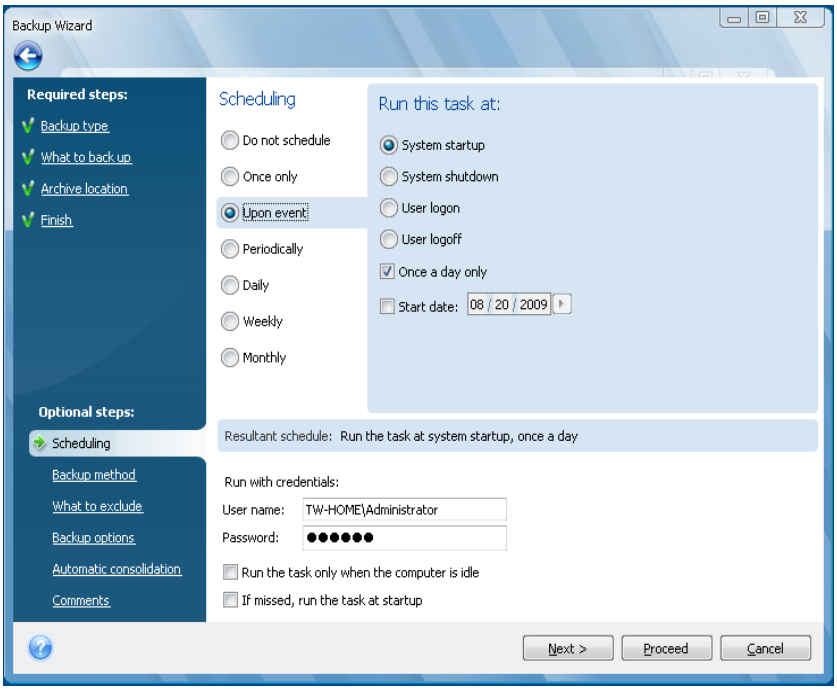
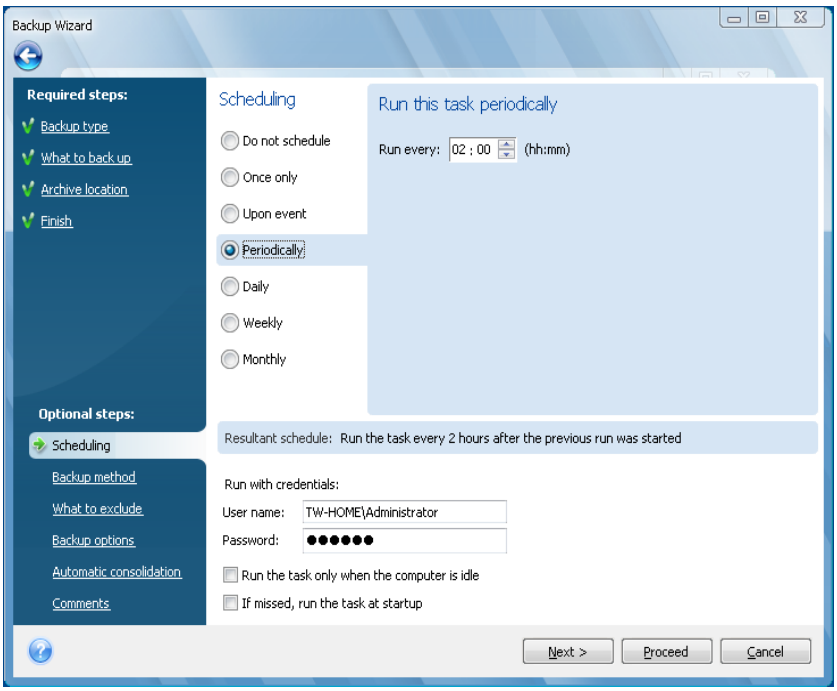
You can also specify the task Start date.

*If you want to run a task only at the first occurrence of the event on the current day, select the **Once a day only** box.*



13.1.3. Setting up periodical execution

If you choose the **Periodically** option, set the Start time and specify the interval between backups in hours and minutes. You can also specify the task Start date.



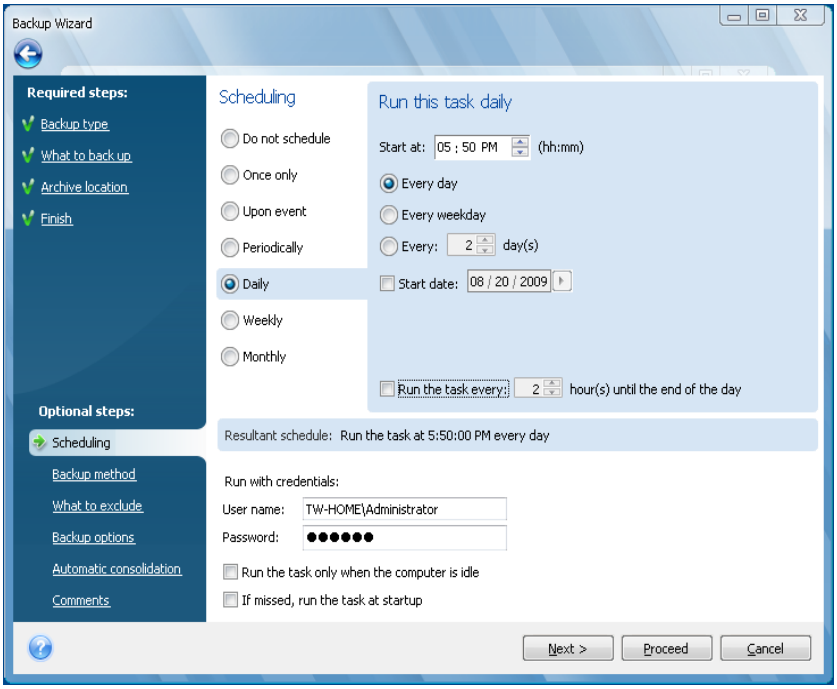
13.1.4. Setting up daily execution

If you choose daily execution, set the Start time and days on which you want to execute the task:

- **Every day**
- **Every weekday**
- **Every x days** – once every several days (specify the interval).

If you want the task to be repeated several times per day, select **Run the task every x hour(s) until the end of the day** box and specify the interval in hours.

You can also specify the task Start date.



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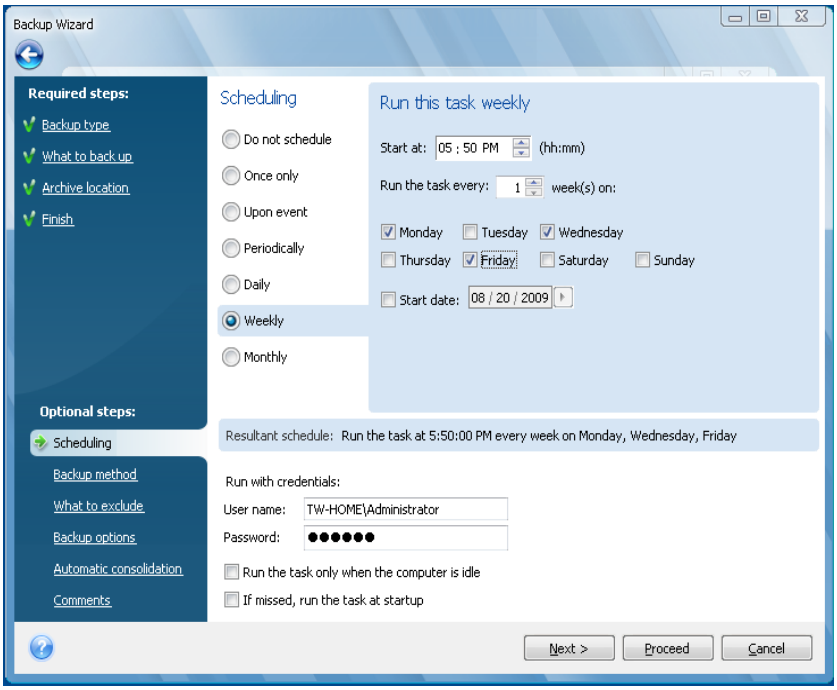
13.1.5. Setting up weekly execution

If you choose weekly execution, set the Start time, specify the task execution periodicity in the **Run the task every x week(s) on:** box (every week, every two weeks, etc.) and select the days on which to execute the task. You can also specify the task Start date.



13.1.6. Setting up monthly execution

If you select monthly execution, set the Start time and days on which to execute the task:

- **On the <specify a day>** – on the specified day (e.g. on the second Tuesday or fourth Friday); select this from the drop-down lists.
- **On every: x day(s) of the month** – on the specified date(s). For example, you may want the task to be executed on the 10th, 20th, and Last days of the month.

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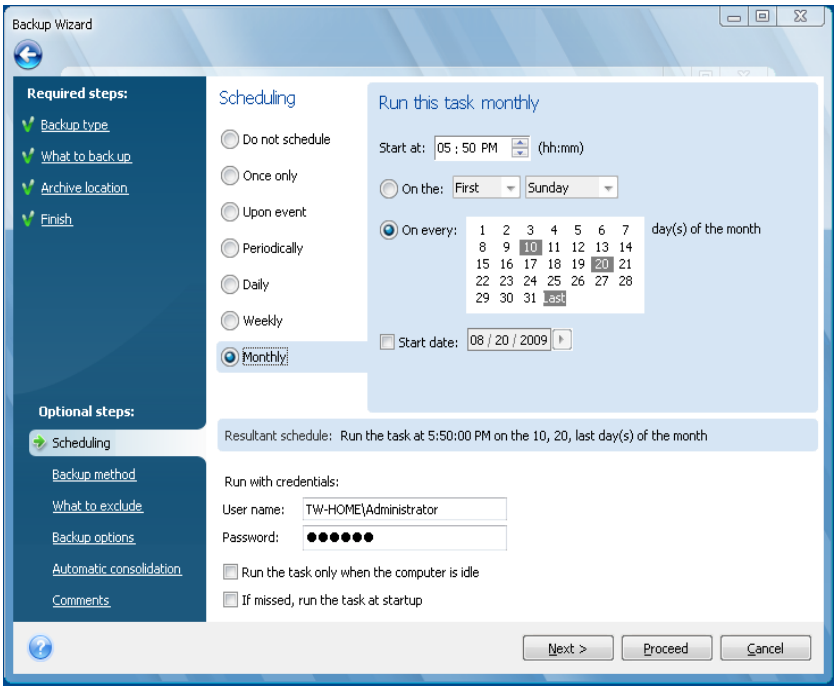
You can also specify the task Start date.


Backup Wizard
Required steps:
Backup type
What to back up
Archive location
Finish
Optional steps:
Scheduling
Backup method
What to exclude
Backup options
Automatic consolidation
Comments
Scheduling
Do not schedule
Once only
Upon event
Periodically
Daily
Weekly
Monthly
Run this task monthly
Start at: 05 : 50 PM (hh:mm)
On the: First Sunday
On every: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 last day(s) of the month
Start date: 08 / 20 / 2009
Resultant schedule: Run the task at 5:50:00 PM on the 10, 20, last day(s) of the month
Run with credentials:
User name: TW-HOME\Administrator
Password: ●●●●●●
Run the task only when the computer is idle
If missed, run the task at startup
Next >
Proceed
Cancel

13.2. Importing scheduled tasks when upgrading

When you upgrade from a previous Acronis True Image Home version and already have scheduled tasks, during the first start the upgraded Acronis True Image Home will automatically find those tasks and add them to the list of tasks shown on the **Tasks and Log** screen on the **Scheduled tasks** tab.

The tasks are executed according to their scripts. The program searches for task scripts in a special folder (the usual path is C:\Documents and Settings\All Users\Application Data\Acronis\TrueImageHome\Scripts). The new tasks created after upgrading will have their scripts placed into the same folder.

If you upgrade from Acronis True Image Home 2009, you will be able to perform all operations provided by the program with the imported tasks. These operations are described in the Managing scheduled tasks (p. 116) section.

If you have any unscheduled tasks that were created when you performed backup or validation in Acronis True Image Home 2009 manually without scheduling, they will be found too and shown on the **Unscheduled tasks** tab.

When upgrading from Version 11 of Acronis True Image Home, the existing tasks will be found too. However, you will only be able to start them manually. This is because the task script format underwent serious changes in Acronis True Image Home 2009. So there is little sense in keeping the old tasks. You will need to create new scheduled tasks from scratch. Tasks from Acronis True Image Home 10 and earlier versions cannot be imported.

13.3. Managing scheduled tasks

To manage the scheduled tasks, click **Tasks and Log** on the sidebar and you will go to the **Tasks management** screen with the **Scheduled tasks** tab selected by default in the right pane. The tab

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displays all scheduled tasks along with their name, status, schedule, last run time, last result, and owner.

By default you see only your own tasks, but you have the option to view or manage tasks of other users. To do so, select **Tools & Utilities** → **Options** → **Appearance** from the main program menu. Then choose **Filter** and unselect the **Show only tasks created by the current user** check box.

You can change the task parameters by editing them. This is performed in the same way as creation, however, the earlier selected options will be set, so you only have to enter the changes. To edit a task, select it and click **Edit** on the toolbar.

If you want to make changes only in a task schedule, select the task and click **Change Schedule** on the toolbar.

To delete a task with confirmation, select it and click **Delete** on the toolbar.

To rename a task, select it, click **Rename** on the toolbar and enter the new task name.

You can also start execution of a selected task at any moment by clicking **Start** on the toolbar.

If you do not need to run a scheduled task for some time, but intend to use it again in the future, you can disable the task for the time being by clicking **Disable** on the toolbar and then re-enable it when required. So it is not necessary to recreate the task from scratch.

When you need to create several similar tasks, select a task, click **Clone** on the toolbar, then rename the cloned task and introduce the required changes.

In addition, all the above actions can be chosen from the shortcut menu that you open by right-clicking on a selected scheduled task.

The same operations are available for unscheduled tasks listed on the **Unscheduled tasks** tab. If while editing an unscheduled task you set up any of the scheduling options, that task moves from the **Unscheduled tasks** tab to the **Scheduled tasks** tab.

13.4. Examples of backup scheduling scenarios

13.4.1. Full backups with automatic deletion on quota violation

Some users prefer creating only full backups. A full backup has the shortest recovery time compared to incremental or differential ones and, in addition, many consider it more reliable, since the program needs just one file when recovering a backup.

Let's suppose you have plenty of room on the hard disk dedicated to storing backups and want to have five full backups of the system disk made weekly thus spanning a period of about a month. In addition, you want to ensure automatic deletion of the oldest backup in order to keep just five backups in the backup archive. Here's how it can be done:

a) When you come to the "Scheduling" step while configuring a backup task, it is necessary to select the "Weekly" option, leave the default value "Run the task every 1 week", then select a day of the week for making backups, e.g. Saturday.

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b) At the "Backup method" step choose the "Full" method and unselect the "A new full backup overwrites the previous one" check box (selected by default).

c) At the "Automatic consolidation" step it is necessary to select the "Number of backups exceeds" check box and set a limit of five backups, then finish configuring the backup task.

The program will create full backups starting from the nearest Saturday and will accumulate the first five backups in the archive. On the sixth run the program will create a sixth backup thus exceeding the limit on the number of backups. As it is not possible to consolidate full backups, the program will simply delete the oldest backup. This procedure will be repeated during the next task run, etc.

Of course, this backup scenario can be used for making full backups more and less frequently, for example, on daily or monthly basis – users just need to set an appropriate schedule.

In the given backup scenario you could achieve the same result by selecting the "Storage period of old backups exceeds (days):" check box and setting the number of days to 30, for example. The program will delete the oldest backup when its storage period exceeds 30 days, leaving five backups that are "younger" than 30 days.

13.4.2. Full backups with automatic deletion when backup storage is filled

Here is one more scenario for using only full backups and automatically deleting the oldest ones. Suppose you want to save weekly full backups to a dedicated hard disk drive until it has room for backups and then want the program to delete the oldest backup thus freeing up space for the next one.

In this case you need to set the task options like in items a) and b) of the previous backup scenario. At the "Automatic consolidation" step select the "Size of archive exceeds" check box and set a limit on the archive size as follows: the hard disk capacity minus the estimated size of a full backup (the limit can be adjusted by editing the task after running the first full backup and finding out the actual size of the backup file). To trigger the automatic consolidation procedure, which in this case will consist in deleting the oldest backup, the archive size quota must be violated. This will occur after creating the next full backup that should fill up the disk almost to capacity. When setting the archive size limit, it is advisable to provide some additional reserve space for the last full backup created before consolidation, because the subsequent full backups may be larger than the first one. One more argument in favor of providing a reserve space – if there is not enough room for the backup file, the task run will be aborted, so the program will neither create a new backup, nor delete the oldest one. If you do not intervene, this situation will repeat during subsequent task runs.

13.4.3. Full backups to Acronis Secure Zone with automatic deletion

There is one more way of implementing the scenario of creating only full backups and automatically deleting the oldest ones. This can be done using the Acronis Secure Zone. As in the previous scenario, suppose you want to save weekly full backups to a dedicated hard disk drive until it has room for backups and then want the program to delete the oldest backup, thus freeing place for the next one.

a) Create Acronis Secure Zone on the hard drive you want to use for storing your backups. The size of the zone will depend on your requirements and may vary from the space needed for storing a single full backup (with some reserve) to practically the hard drive's entire capacity.

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b) Open the default backup options by choosing **Tools** → **Options** → **Backup options** in the main menu. Click on **Error handling** and select the **When not enough space in ASZ, delete the oldest archive** box.

c) When you come to the **Scheduling** step while configuring a backup task, select the **Weekly** option, leave the default value "Run the task every 1 week", then select a day of the week for making backups, e.g. Saturday.

d) At the **Backup method** step choose the **Full** option. This will result in creating only full backups. Finish configuring the task.

The task will run and the full backups will be stored in the Acronis Secure Zone until it has room. When the zone does not have enough space for the current full backup, the program will automatically delete the oldest backup to free up space for the new one.

13.4.4. Full + incremental/differential backups with automatic rotation

Because of Vista and Windows 7's housekeeping activities such as defragmenting and indexing that usually run in the background, incremental and differential backups may be comparable in size with full backups even if changes made by a user are few and far between. Taking this into account, the optimum backup policy for users of Vista and Windows 7, as well as automatic disk defragmentation programs such as Diskeeper may be making only full backups.

With this in mind, let's consider a more complex backup strategy scenario requested by a real Acronis True Image Home user. You want to schedule backups as follows: on the first day a full backup, followed by 6 incremental (or differential) backups, than a new full backup. You want to keep 3 weeks worth of backups but not more. At the beginning of the fourth week, once the full backup has been created, you would like the program to automatically delete the full backup from the first week and all 6 linked incremental backups. This is not possible to implement with one backup task, but three backup tasks will provide the desired result.

Suppose you plan to make backups every night at 10:00 PM.

a) When you come to the **Scheduling** step while configuring the first backup task, select the **Weekly** option, set "Run the task every 3 weeks", then select all seven days of week and set 10:00 PM as the start time. Leave the current date as the "Start date".

b) At the **Backup method** step choose the Incremental method, select the "Create a new full backup after" checkbox and set "6" in the number of backups field. In addition, select the **Delete previous backup archive** check box, then finish configuring the backup task.

c) Create the second backup task with the same settings as the first one. To do this, right-click on the just created task on the **Tasks and Log** screen and choose **Clone** in the pop-up menu. Rename the cloned task as you wish and then choose **Edit** on the toolbar or in the pop-up menu.

When creating the second task, make sure that the target archive name differs from the archive name assigned in the first task, because if the names are identical the backups created by the second task will overwrite those created by the first one.

In addition, set the date a week later than the current one as the "Start date".

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d) Similarly create the third backup task with the same settings except the backup archive name. The start date should be two weeks later.

When all three tasks run, they will implement exactly the backup scenario you want.

This approach can be used for implementing any similar backup strategy. For instance, if you want to keep backup chains for two weeks, create two scheduled tasks each running every 2 weeks. To keep such backup chains for four weeks, it is necessary to create four tasks each running every 4 weeks, etc.

If you turn off the computer for several days, for instance, when leaving home for the weekend or on vacation, some incremental backups will not run and this sequence will be broken. In such case you will have to delete old backup archives and start the scenario once more.

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14. Managing Acronis Secure Zone

The Acronis Secure Zone is a special partition for storing archives on the same computer that created the archive. For more information see Acronis Secure Zone™ (p. 21).

When you select **Tools & Utilities** → **Manage Acronis Secure Zone** in the main menu, the program searches for the zone on all local drives. If the zone is found, the wizard will offer to manage it (resize or change the password) or delete it. If there is no zone, you'll be prompted to create it.

If the Acronis Secure Zone is password-protected, the correct password must be entered before any operation can take place.

14.1. Creating Acronis Secure Zone

Acronis Secure Zone can be located on any internal disk except dynamic volumes and GPT disks. It is created using unallocated space, if available, or at the expense of free space on a partition. Partition resizing may require a reboot.

A computer can have only one Secure Zone. To create a zone on another disk, you must first delete the existing zone.

1. Before creating the zone, you need to estimate its size. To do so, start a backup and select all data you are going to copy into it. At the **Backup Options** step set the compression level. You will see the estimated full backup size (for disk/partition backup) or the approximate compression ratio (for file-level backup) with which you can calculate the estimated full backup size. Multiply this by 1.5 to be able to create incremental or differential backups. Remember that the *average* compression rate is 2:1, so you can use this as a guide as well to create a zone. Let's say you have a hard disk with 10GB of programs and data. Under normal conditions, that will compress down to approximately 5GB. As a result, you might want to make the total size 7.5GB.
2. If there are several disks installed, select one on which to create Acronis Secure Zone.

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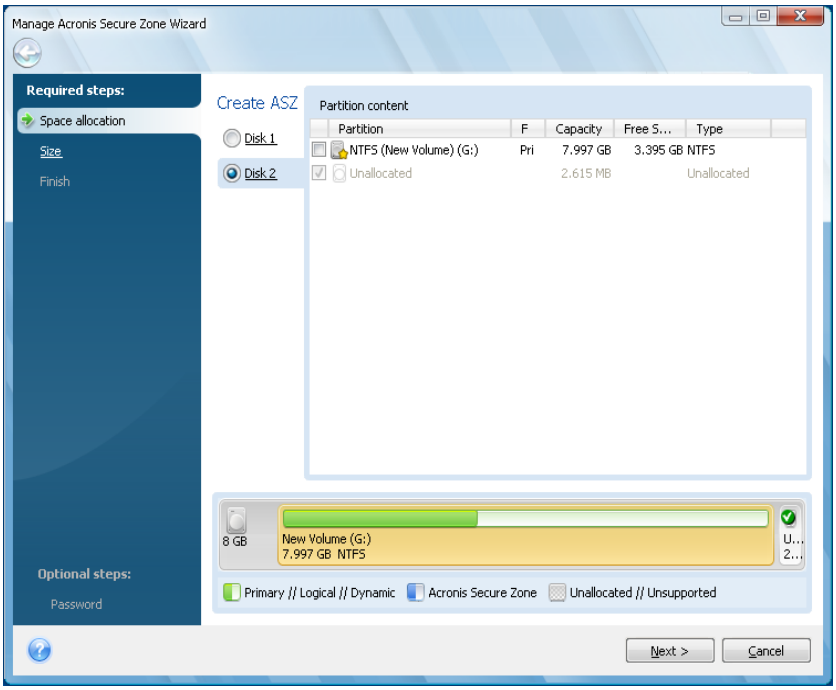
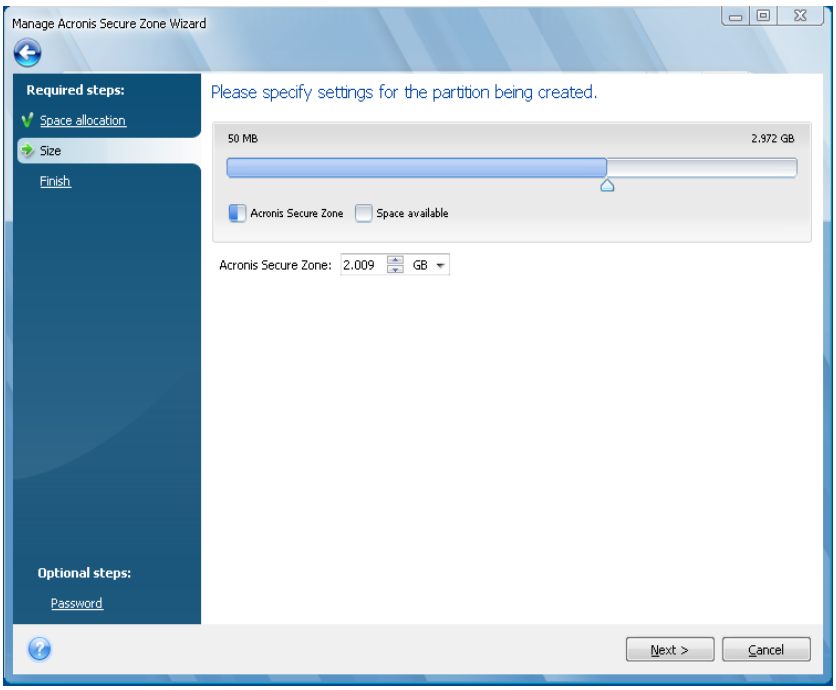
3. Select the partitions from whose space the zone will be created.



4. In the next window, enter the Acronis Secure Zone size or drag the slider to select any size between the minimum and maximum.



The minimum size is about 50 MB, depending on the geometry of the hard disk. The maximum size is equal to the disk's unallocated space plus the total free space on all partitions selected at the previous step.

When creating the zone, the program will first use the unallocated space. If there is not enough unallocated space, the selected partitions will be decreased. Partition resizing may require a reboot.

Reducing a system partition to the minimum size might prevent your operating system from booting.

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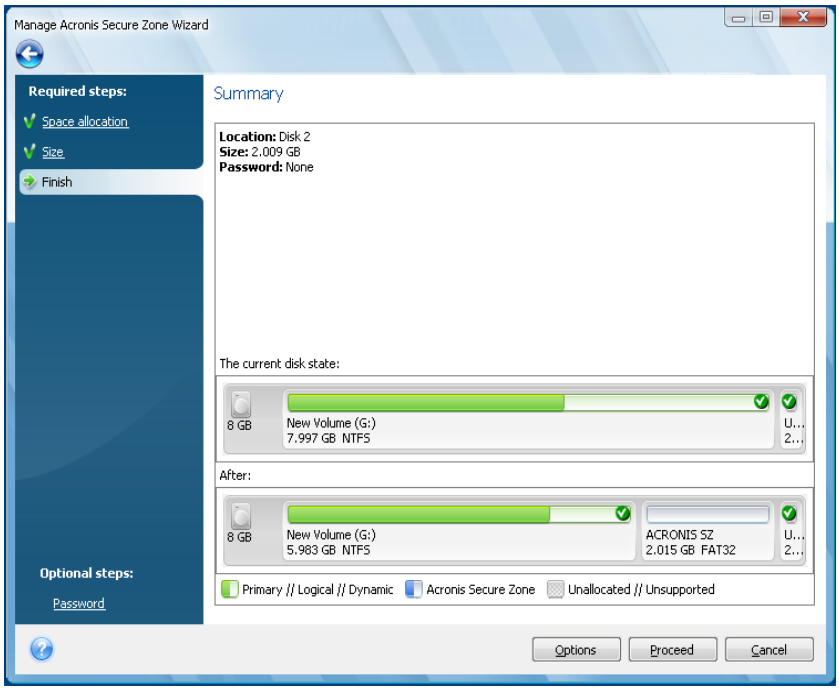
5. Then you will see a list of operations to be performed on the partitions (disks).



6. You can set a password to restrict access to the zone. The program will ask for the password at any operation relating to it, such as data backup and recovery, mounting images or validating archives on the zone, resizing and deleting the zone. To set a password, click **Options** on the Summary window.

   Acronis True Image Home repair or update will not affect the password. However, if the program is removed and then installed again while keeping the Acronis Secure Zone on the disk, the password to the zone will be reset.

After you click **Proceed**, Acronis True Image Home will start creating the zone. Progress will be reflected in a special window. If necessary, you can stop zone creation by clicking **Cancel**. However, the procedure will be canceled only after the current operation is finished.

Acronis Secure Zone creation might take several minutes or longer. Please wait until the whole procedure is finished.

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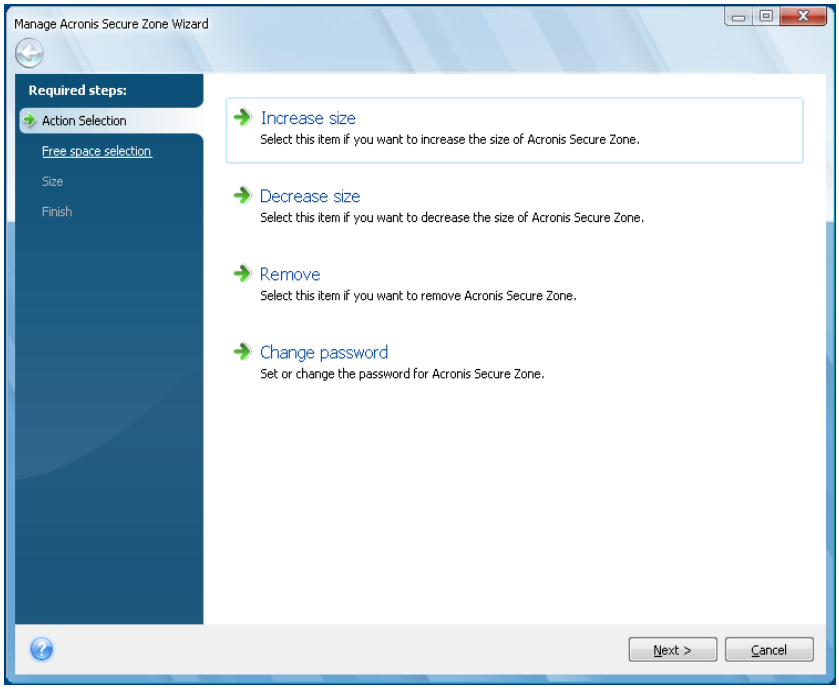
14.2. Resizing Acronis Secure Zone

1. If you want to resize the Acronis Secure Zone, select **Tools & Utilities** → **Manage Acronis Secure Zone** in the main menu.


Manage Acronis Secure Zone Wizard
Required steps:
Action Selection
Free space selection
Size
Finish
Increase size
Select this item if you want to increase the size of Acronis Secure Zone.
Decrease size
Select this item if you want to decrease the size of Acronis Secure Zone.
Remove
Select this item if you want to remove Acronis Secure Zone.
Change password
Set or change the password for Acronis Secure Zone.
Next >
Cancel

2. Select to increase or decrease the zone size. You might need to increase it to provide more space for archives. The opposite situation may arise if any partition lacks free space.
3. Select partitions from which free space will be used to increase the size of Acronis Secure Zone or that will receive free space after the zone is reduced.
4. Enter the new size of the zone or drag the slider to select the size.

   When increasing the size of Acronis Secure Zone, the program will first use unallocated space. If there is not enough unallocated space, the selected partitions will be decreased in size. Resizing of the partitions may require a reboot.

   When reducing the size of the zone, any unallocated space, if the hard disk has any, will be allocated to the selected partitions along with the space freed from the zone. Thus, no unallocated space will remain on the disk.
5. Next you will see a list of briefly described operations to be performed on partitions (disks).

After you click **Proceed**, Acronis True Image Home will start resizing the zone. Progress will be reflected in a special window. If necessary, you can stop the procedure by clicking **Cancel**. However, the procedure will be canceled only after the current operation is finished.

Zone resizing can take several minutes or longer. Please wait until the whole procedure is finished.

14.3. Changing password for Acronis Secure Zone

1. If you want to change the password for Acronis Secure Zone, select **Tools & Utilities** → **Manage Acronis Secure Zone** in the main menu.

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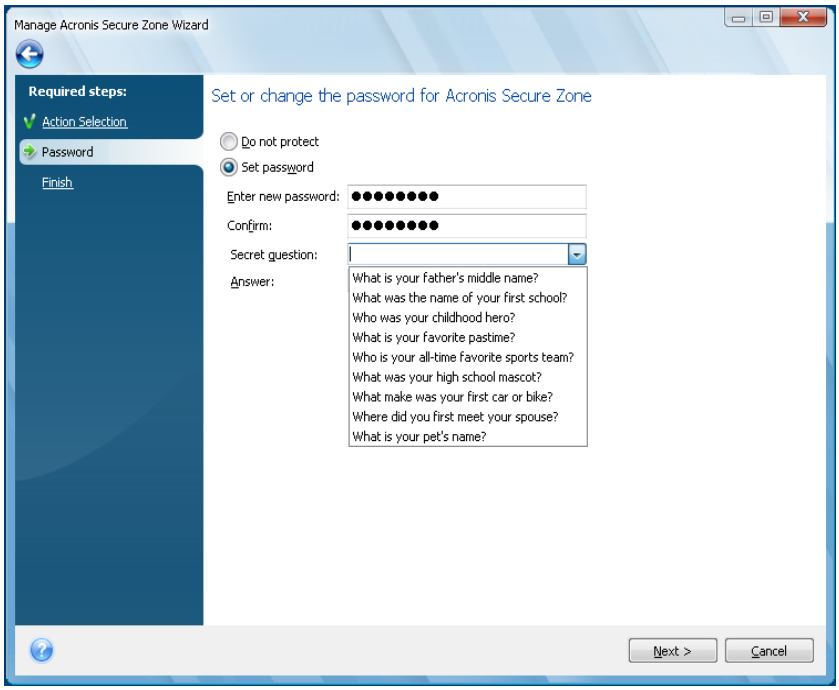
2. Select **Change password.**


Manage Acronis Secure Zone Wizard
Required steps:
Action Selection
Password
Finish
Set or change the password for Acronis Secure Zone
Do not protect
Set password
Enter new password:
Confirm:
Secret question:
Answer:
What is your father's middle name?
What was the name of your first school?
Who was your childhood hero?
What is your favorite pastime?
Who is your all-time favorite sports team?
What was your high school mascot?
What make was your first car or bike?
Where did you first meet your spouse?
What is your pet's name?
Next >
Cancel

3. Enter the new password and confirm it or select **Do not use password protection**. You can also select a secret question that will be asked in case you forget the password.
4. To perform the password change operation, click **Proceed** in the final wizard window.

14.4. Deleting Acronis Secure Zone

1. If you want to remove the Acronis Secure Zone, select **Tools & Utilities** → **Manage Acronis Secure Zone** in the main menu and then choose **Remove Acronis Secure Zone**.
2. Select the partitions to which you want to add the space freed from the zone. If you select several partitions, the space will be distributed proportionally to each partition.
3. Next, you will see a list of briefly described operations to be performed on partitions (disks).

After you click **Proceed**, Acronis True Image Home will start deleting the zone. Progress will be reflected in the opened window. If necessary, you can stop the procedure by clicking **Cancel**. However, the procedure will be canceled only after the current operation is finished.

Zone deletion might take several minutes or longer. Please wait until the whole procedure is finished.

Acronis Secure Zone deletion will automatically destroy all backups stored in the zone.

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15. Creating bootable media

15.1. Creating Linux-based rescue media

You can run Acronis True Image Home from an emergency boot disk on a bare-metal system or a crashed computer that cannot boot. You can even back up disks on a non-Windows computer, copying all its data into the backup archive by imaging the disk one sector at a time. To do so, you will need bootable media that has a copy of the standalone Acronis True Image Home version installed on it.

If you purchased the boxed product, you already have a bootable CD, because the installation CD itself is bootable in addition to serving as the program installation disk.

If you purchased Acronis True Image Home on the Web or as a download from a retailer, you can create bootable media using the Bootable Media Builder. For this, you will need a blank CD-R/RW, a blank DVD+R/RW or any other media from which your computer can boot, such as a Zip drive.

Acronis True Image Home also provides the ability to create an ISO image of a bootable disc on the hard disk.

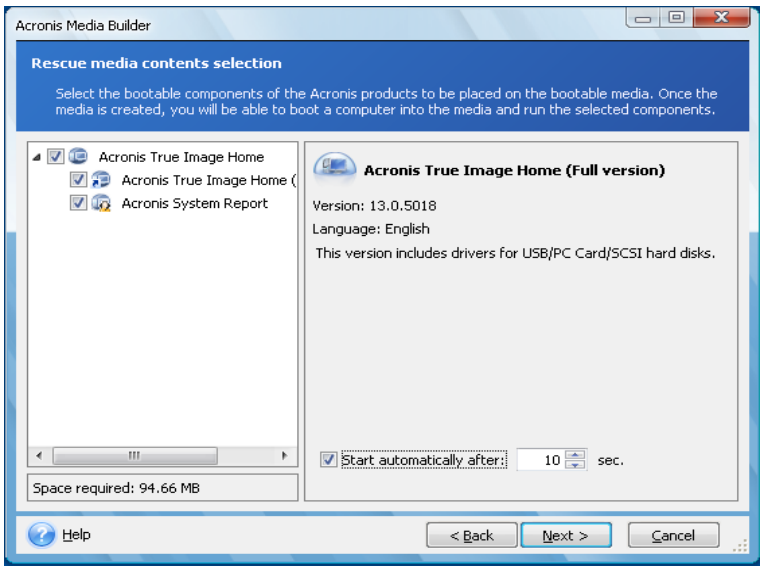
If you have other Acronis products, such as Acronis Disk Director Suite installed on your computer, you can include standalone versions of these programs on the same bootable disk as well.

If you have chosen not to install the Bootable Media Builder during Acronis True Image Home installation, you will not be able to use this feature.

*****

When booting from the Rescue Media, you cannot perform backups to disks or partitions with Ext2/Ext3, ReiserFS, and Linux SWAP file systems.

1. Choose **Create Bootable Rescue Media** in the **Tools & Utilities** menu. You can also run the Bootable Rescue Media Builder without loading Acronis True Image Home by choosing **Programs** → **Acronis** → **Acronis True Image Home** → **Bootable Rescue Media Builder** from the **Start** menu.
2. Select which components of the Acronis programs you want to place on the bootable media.


Acronis Media Builder
Rescue media contents selection
Select the bootable components of the Acronis products to be placed on the bootable media. Once the media is created, you will be able to boot a computer into the media and run the selected components.
Acronis True Image Home
Acronis True Image Home (
Acronis System Report
Acronis True Image Home (Full version)
Version: 13.0.5018
Language: English
This version includes drivers for USB/PC Card/SCSI hard disks.
Start automatically after:
10
sec.
Space required: 94.66 MB
Help
< Back
Next >
Cancel

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Acronis True Image Home offers the following components:

Acronis True Image Home full version

Includes support of USB, PC Card (formerly PCMCIA) and SCSI interfaces along with the storage devices connected via them, and therefore is strongly recommended.

Acronis System Report

This component allows you to generate a system report after booting from the rescue media when both Windows and Acronis True Image Home full version cannot start.

Acronis True Image Home safe version

If you purchased the boxed product, the installation CD contains an installation file for installing Acronis True Image Home safe version and an Acronis True Image Home plug-in for the well-known Bart PE utility. The safe version does not include USB, PC Card, or SCSI drivers. This is recommended for use on rare occasions where problems running the full version occur. After installation **Acronis True Image Home safe version** will appear as one of the components to be offered by **Acronis Media Builder** for placing on the bootable media and you will be able to add **Acronis True Image Home** safe version when creating your bootable rescue media.

By the way, you can download that installation file from the Acronis Web site.

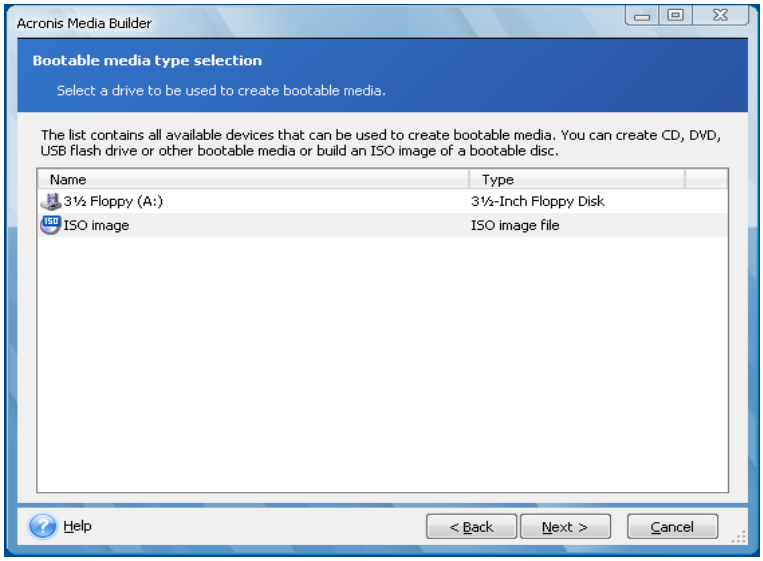
In the next window you can set Bootable media startup parameters in order to configure rescue media boot options for better compatibility with different hardware. Several options are available (nousb, nomouse, noapic, etc.). For all the available startup parameters see Startup Parameters (p. 198). These parameters are provided for advanced users. If you encounter any hardware compatibility problems while testing boot from the rescue media, it may be best to contact Acronis Technical Support.

The **Start automatically after** parameter specifies the timeout interval for the boot menu. If this parameter is not specified, the program will display the boot menu and wait for you to select whether to boot the OS or the Acronis component. If you set, for example, **10 sec** for Acronis rescue media, the standalone Acronis True Image Home will launch 10 seconds after the menu is displayed.

To find out more about components of other Acronis products, see their respective user guides.

3. Select the type of bootable media (CD-R/RW, DVD+R/RW or 3.5” diskettes) to create. If your BIOS has this feature, you can create other bootable media such as removable USB flash drives. You can also choose to create a bootable disk ISO image.

When using 3.5" diskettes, you will only be able to write one component at a time (for example, the full version of Acronis True Image Home) on a set of diskettes. To write another component, start Bootable Media Builder again.


Acronis Media Builder
Bootable media type selection
Select a drive to be used to create bootable media.
The list contains all available devices that can be used to create bootable media. You can create CD, DVD, USB flash drive or other bootable media or build an ISO image of a bootable disc.
Name
Type
3½ Floppy (A:)
3½-Inch Floppy Disk
ISO image
ISO image file
Help
< Back
Next >
Cancel

4. If you are creating a CD, DVD or any removable media, insert a blank disc so the program can determine its capacity. If you choose to create a bootable disc ISO image, specify the ISO file name and the folder in which to place it.
5. Next, the program will estimate how many blank diskettes are required (in case you have not chosen ISO or CD/DVD) and give you time to prepare them. When you are finished, click **Proceed**.

After you create a bootable media, mark it and keep it in a safe place.

Please keep in mind that the backups created by the later program version may be incompatible with the previous program versions. Due to this reason, we strongly recommend that you create a new bootable media after each Acronis True Image Home upgrade. One more thing you should remember – when booting from the rescue media and using a standalone version of Acronis True Image Home, you cannot recover files and folders encrypted with use of the encryption feature available in Windows XP and Windows Vista operating systems. For more information see File-level security settings (p. 79). On the other hand, backup archives encrypted using the Acronis True Image Home encryption feature can be recovered.

15.2. Creating BartPE disc with Acronis True Image Home

Bart PE (Bart Preinstalled Environment) is a bootable Windows CD/DVD created from the original Windows XP or Windows Server 2003 installation/setup CD. The current version of Acronis True Image Home does not have a plug-in for a preinstalled environment based on Windows Vista and Windows 7.

The main advantage of Bart PE is that it uses Windows drivers and has a Windows-like graphical user interface. It also provides for adding any storage drivers at startup in the same manner as when installing Windows on the hard drive (by pressing F6 and inserting a diskette with the drivers).

Applications are installed into Bart PE in the form of plug-ins and the Acronis True Image Home plug-in can be included into the Bart PE plug-in tab.

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If you do not have the boxed version of Acronis True Image Home, you will need to download a separate installation file from your Acronis account:

- Go to My Account section
- Log in;
- Register the serial number for your copy of Acronis True Image Home (if it is not registered yet);
- Click **Registered Products**;

Under the registered products click on **Bart PE & Safe Media** to download the plug-in. Install the plug-in as follows:

1. Double-click on the downloaded file to start installation.
2. If you only want to install the Bart PE plug-in, choose Custom installation and unselect the Safe Media add-on. Otherwise choose Typical.
3. Having finished the installation, you can proceed with creating a Bart PE CD/DVD with Acronis True Image Home plug-in.

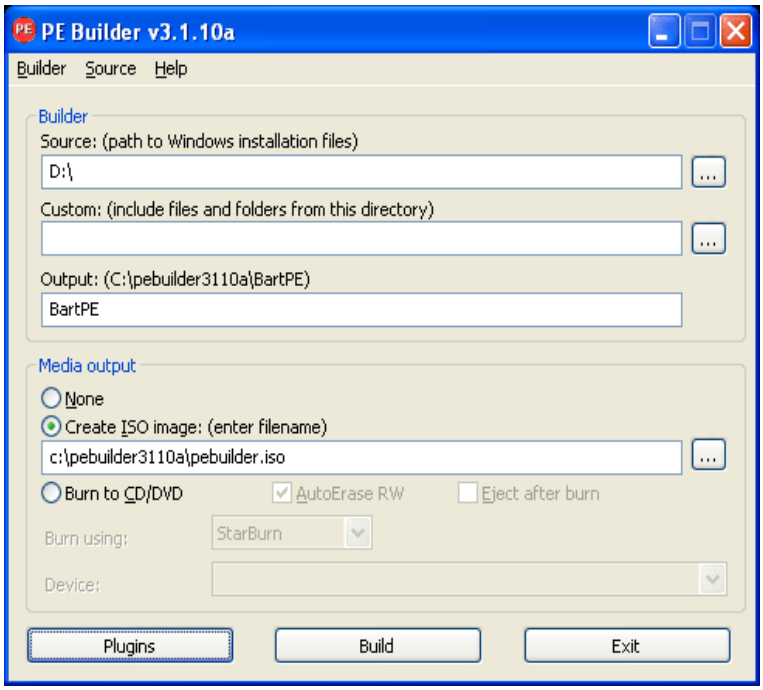
The below description is based on PE builder version 3.1.10a.

To create a BartPE CD with the Acronis True Image Home plug-in follow the instructions below:

- Download the PE builder and install it;

Go to the Acronis True Image Home installation folder. (The default folder is C:\Program Files\Acronis or C:\Program Files\Acronis\Media Add-ons). Rename the BartPE folder to Acronis. Copy this folder into the Plugin folder in the BartPE builder installation directory. (The default directory is C:\pebuilder3110a or similar);

Run the PE builder, put in the necessary paths (the online help is available at PE builder help), and click the Plugins button:



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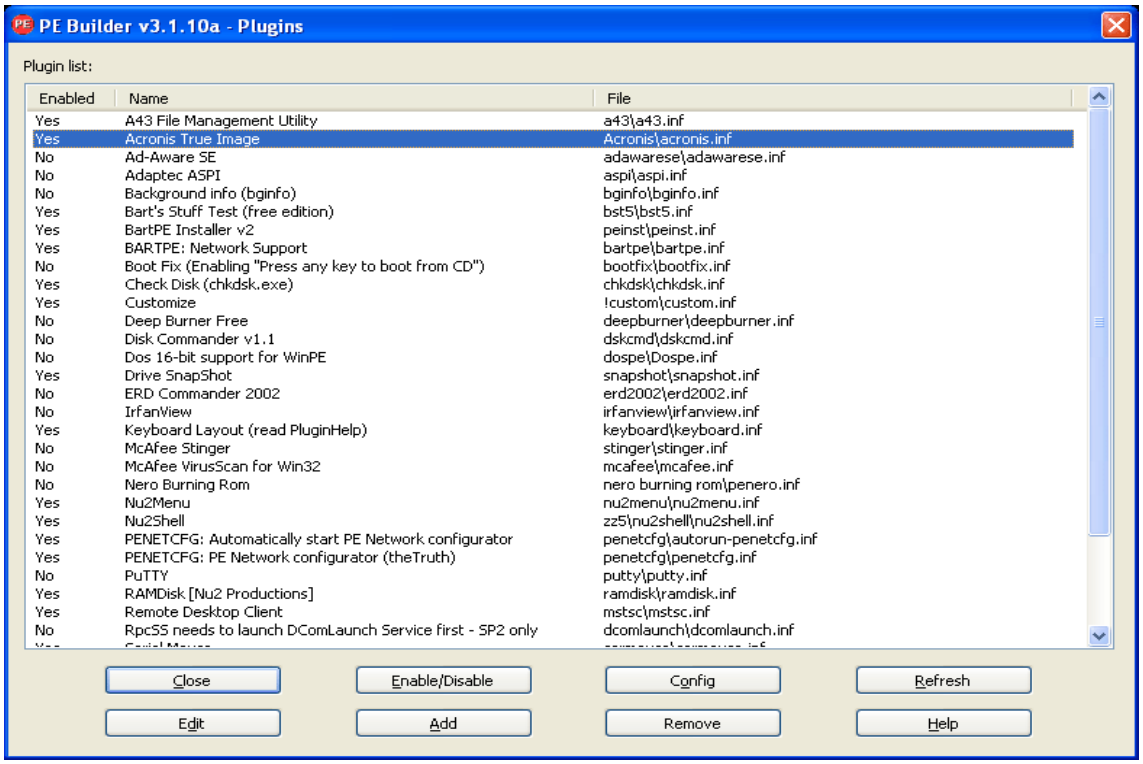
Make sure you have the Acronis True Image Home plug-in enabled on the Plugins screen:


PE Builder v3.1.10a - Plugins
Plugin list:
Enabled | Name | File
Yes | A43 File Management Utility | a43\a43.inf
Yes | Acronis True Image | Acronis\acronis.inf
No | Ad-Aware SE | adawarese\adawarese.inf
No | Adaptec ASPI | aspi\aspi.inf
No | Background info (bginfo) | bginfo\bginfo.inf
Yes | Bart's Stuff Test (free edition) | bst5\bst5.inf
Yes | BartPE Installer v2 | peinst\peinst.inf
Yes | BARTPE: Network Support | bartpe\bartpe.inf
No | Boot Fix (Enabling "Press any key to boot from CD") | bootfix\bootfix.inf
Yes | Check Disk (chkdsk.exe) | chkdsk\chkdsk.inf
Yes | Customize | !custom\custom.inf
No | Deep Burner Free | deepburner\deepburner.inf
No | Disk Commander v1.1 | dskcmd\dskcmd.inf
No | Dos 16-bit support for WinPE | dospe\Dospe.inf
Yes | Drive SnapShot | snapshot\snapshot.inf
No | ERD Commander 2002 | erd2002\erd2002.inf
No | IrfanView | irfanview\irfanview.inf
Yes | Keyboard Layout (read PluginHelp) | keyboard\keyboard.inf
No | McAfee Stinger | stinger\stinger.inf
No | McAfee VirusScan for Win32 | mcafee\mcafee.inf
No | Nero Burning Rom | nero burning rom\penero.inf
Yes | Nu2Menu | nu2menu\nu2menu.inf
Yes | Nu2Shell | zz5\nu2shell\nu2shell.inf
Yes | PENETCFG: Automatically start PE Network configurator | penetcfg\autorun-penetcfg.inf
Yes | PENETCFG: PE Network configurator (theTruth) | penetcfg\penetcfg.inf
No | PuTTY | putty\putty.inf
Yes | RAMDisk [Nu2 Productions] | ramdisk\ramdisk.inf
Yes | Remote Desktop Client | mstsc\mstsc.inf
No | RpcSS needs to launch DComLaunch Service first - SP2 only | dcomlaunch\dcomlaunch.inf
Close
Enable/Disable
Config
Refresh
Edit
Add
Remove
Help

Close the Plugins window and click the Build button to start the building process. If you want the image to be burned to CD, select the Burn to CD option and choose the necessary burner in the Device menu;

After the image is created, burn it to CD or DVD. (If you did not check the Burn to CD option at the previous step.)

After booting from the CD/DVD, you can find the Acronis True Image Home plug-in in Go/System/Storage.

Adding drivers

BartPE supports adding two types of drivers: storage drivers and network drivers. For instructions on how to add drivers refer to PE builder driver help.

There is also an option to add storage drivers (for RAID or SCSI devices) during BartPE boot-up. (You need to press F6 and point to the diskette with the drivers). Common storage drivers are available at PE builder drivers.

When you boot from the newly created BartPE media, Acronis True Image Home can be found here:

Go → System → Storage → Acronis True Image Home.

15.3. Creating WinPE-based rescue media

To create a WinPE-based rescue media, you need to purchase and install Acronis Plus Pack.

Acronis Plug-in for WinPE can be added to WinPE distributions based on any of the following kernels:

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- Windows XP Professional with Service Pack 2 (PE 1.5)
- Windows Vista (PE 2.0)
- Windows Vista SP1 (PE 2.1)
- Windows 7 (PE 3.0)

If you already have media with PE1.x distribution, unpack the media ISO to a local folder and start the Acronis WinPE ISO Builder by selecting it from Start → Acronis → Plus Pack for Acronis True Image Home 2010. The wizard will guide you through the necessary operations. Please refer to Adding the Acronis Plug-in to WinPE 1.x (p. 131) for details.

To be able to create or modify PE 2.x and 3.0 images, you must have Windows Automated Installation Kit (AIK) installed. The further operations are described in the Adding the Acronis Plug-in to WinPE 2.x or 3.0 (p. 132) section.

If you do not have Windows AIK installed on your PC, prepare as follows:

1. Download and install Windows Automated Installation Kit.

   AIK for Windows Vista (PE 2.0):

   http://www.microsoft.com/Downloads/details.aspx?familyid=C7D4BC6D-15F3-4284-9123-679830D629F2&displaylang=en

   AIK for Windows Vista SP1 and Windows Server 2008 (PE 2.1):

   http://www.microsoft.com/downloads/details.aspx?FamilyID=94bb6e34-d890-4932-81a5-5b50c657de08&DisplayLang=en

   AIK for Windows 7 (PE 3.0):

   http://www.microsoft.com/DOWNLOADS/details.aspx?familyid=696DD665-9F76-4177-A811-39C26D3B3B34&displaylang=en
2. [optional] Burn the Windows AIK to DVD or copy to a flash drive.
3. Install the Microsoft .NET Framework v.2.0 from this kit (NETFXx86 or NETFXx64, depending on your hardware.)
4. Install Microsoft Core XML (MSXML) 5.0 or 6.0 Parser from this kit.
5. Install Windows AIK from this kit.

It is recommended that you familiarize yourself with the help documentation supplied with Windows AIK. To access the documentation, select **Microsoft Windows AIK** → **Documentation** from the start menu.

15.3.1. Adding the Acronis Plug-in to WinPE 1.x

Acronis Plug-in for WinPE can be added to:

- Windows PE 2004 (1.5) (Windows XP Professional with Service Pack 2)

To add Acronis Plug-in to WinPE 1.x:

1. Unpack all files of your WinPE 1.5 ISO to a separate folder on the hard disk.
2. Select Acronis → Plus Pack for Acronis True Image Home 2010 → Acronis WinPE ISO Builder from the Start menu.
3. Specify path to the folder with the WinPE files.

4. Specify path to the folder with the Acronis Plug-in files. (Check the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Acronis\MediaAddons\Settings\BartPE for the plug-in location.)
5. Specify the full path to the resulting ISO file including the file name.
6. Check your settings in the summary screen and click **Proceed**.
7. Burn the .ISO to CD or DVD using a third-party tool or copy to a flash drive.

Once a machine boots into the WinPE, Acronis True Image Home starts automatically.

15.3.2. Adding the Acronis Plug-in to WinPE 2.x or 3.0

Acronis WinPE ISO Builder provides three methods of integrating Acronis True Image Home with WinPE 2.x and WinPE 3.0:

- Adding the Acronis Plug-in to the existing PE 2 or PE 3 ISO. This comes in handy when you have to add the plug-in to the previously configured PE 2 or PE 3 ISO that is already in use.
- Creating the PE 2 or PE 3 ISO with the plug-in from scratch.
- Adding the Acronis Plug-in to a WIM file for any future purpose (manual ISO building, adding other tools to the image and so on).

To be able to perform any of the above operations, Acronis Plus Pack and Windows Automated Installation Kit (WAIK) must be installed on your PC. If you have not installed WAIK, install it as described in Creating WinPE-based rescue media.

Acronis WinPE ISO Builder supports only x86 WinPE 2.x and WinPE 3.0. This WnPE distribution can also work on x64 hardware.

A PE image based on Win PE 2.x or 3.0 requires at least 256MB RAM to work. The recommended memory size for PE 2.x or 3.0 is 512MB.

Adding Acronis Plug-in to WinPE 2.x or 3.0 ISO

To add Acronis Plug-in to WinPE 2.x or 3.0 ISO:

1. Do one of the following:

   When adding the plug-in to the existing Win PE 2 or PE 3 ISO, unpack all files of your Win PE 2 or 3 ISO to a separate folder on the hard disk.

   When creating a new PE 2 or 3 ISO:

   select from the Start menu **Microsoft Windows AIK → Windows PE Tools Command Prompt**

   run the **copype.cmd** script to create a folder with Windows PE files. For example, from a command prompt, type:

   ```
   cd Program Files\Windows AIK\Tools\PETools\
   copype <arch> <destination>
   ```

   Where <arch> is the hardware architecture (can be x86, amd64, or ia64, but Acronis supports x86 only) and <destination> is a path to the local folder. For example,

   ```
   copype x86 c:\winpe_x86
   ```

2. Select Acronis → Plus Pack for Acronis True Image Home 2010 → Acronis WinPE ISO Builder from the Start menu.
3. Specify path to the folder WinPE\ISO, e.g. c:\winpe_x86\ISO.

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4. Specify path to the folder with the Acronis Plug-in files. (Check the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Acronis\MediaAddons\Settings\BartPE for the plug-in location.)
5. Choose whether you want to create ISO or WIM image.
6. Specify the full path to the resulting image file including the file name.
7. Check your settings in the summary screen and click **Proceed**.
8. Burn the .ISO to CD or DVD using a third-party tool or copy to a flash drive.

Once a machine boots into WinPE, Acronis True Image Home starts automatically.

To create a PE image (ISO file) from the resulting WIM file:

- replace the default boot.wim file in your Windows PE folder with the newly created WIM file. For the above example, type:

```
copy c:\AcronisMedia.wim c:\winpe_x86\ISO\sources\boot.wim
```

- use the **Oscdimg** tool. For the above example, type:

```
oscdimg -n –bc:\winpe_x86\etfsboot.com c:\winpe_x86\ISO
c:\winpe_x86\winpe_x86.iso
```

Adding Acronis Plug-in to WinPE 2.x or 3.0 WIM

1. Select Acronis → Plus Pack for Acronis True Image Home 2010 → Acronis WinPE ISO Builder from the Start menu.
2. Specify path to the source WINPE.WIM file. The standard path to this file for x86 hardware is \Program Files\Windows AIK\Tools\PETools\x86\winpe.wim.
3. Specify path to the folder with the Acronis plug-in files. (Check the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Acronis\MediaAddons\Settings\BartPE for the plug-in location.)
4. Specify the full path to the resulting WIM file including the file name.
5. Check your settings in the summary screen and click **Proceed**.

For how to create a PE image (ISO file) from the resulting WIM file please see the previous section.

For more information on customizing Windows PE, see the Windows Preinstallation Environment User's Guide (Winpe.chm).

16. Working with vhd files

16.1. Converting tib images into vhd virtual disks and vice versa

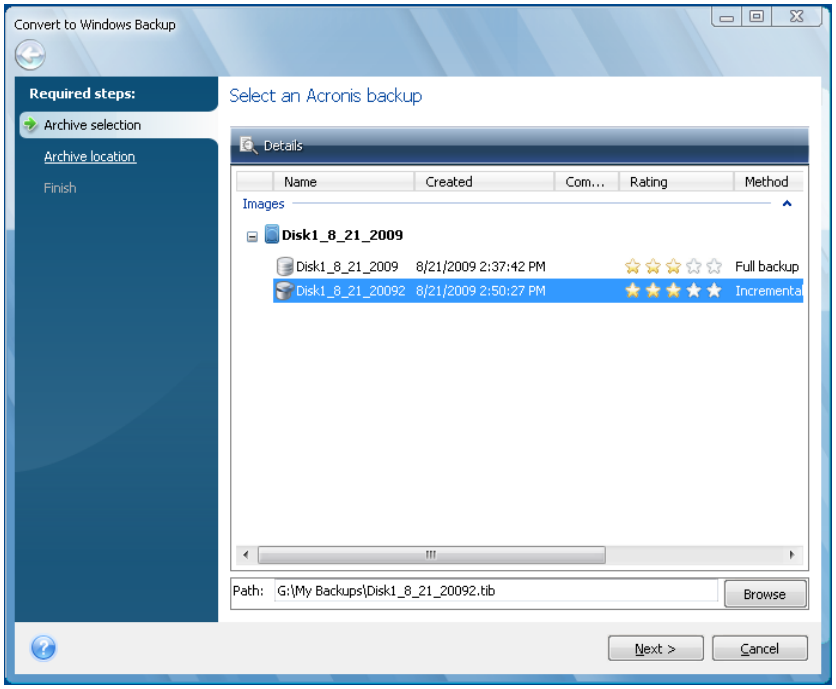
Conversion operations are not supported in standalone versions of Acronis True Image Home that start when booting from the rescue media.

16.1.1. Converting to Windows backup

Users of the Enterprise and Ultimate editions of Windows 7 can convert a tib image of the system partition into the vhd format if they want to use the converted vhd file for booting the operating system. Or they may want to get the ability to mount images without using Acronis True Image Home.

To convert an Acronis disk image (tib file) to a vhd virtual disk:

1. Select **Tools & Utilities** → **Convert Acronis backup** in the main program menu.



2. Select the disk image to convert.

   If the archive is password-protected, Acronis True Image Home will ask for it. Take note that the resulting vhd file will lose password protection.

   Converting an incremental backup requires all the previous incremental backups as well as the original full backup. Converting a differential backup requires the original full backup. The result of conversion will always be a full backup.

3. Specify the path to the file to be created.

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The converted file will be saved to the default location, but you can select another one by clicking **Browse**. The file can be directed to any local storage supported by Acronis True Image Home, except the Acronis Secure Zone and CD/DVD. In addition, it can be directed to an SMB share.

4. Click **Proceed** in the Summary window.

When a tib image selected for conversion contains partitions, for example, from two physical hard disk drives, the program will create two vhd files corresponding to those physical drives.

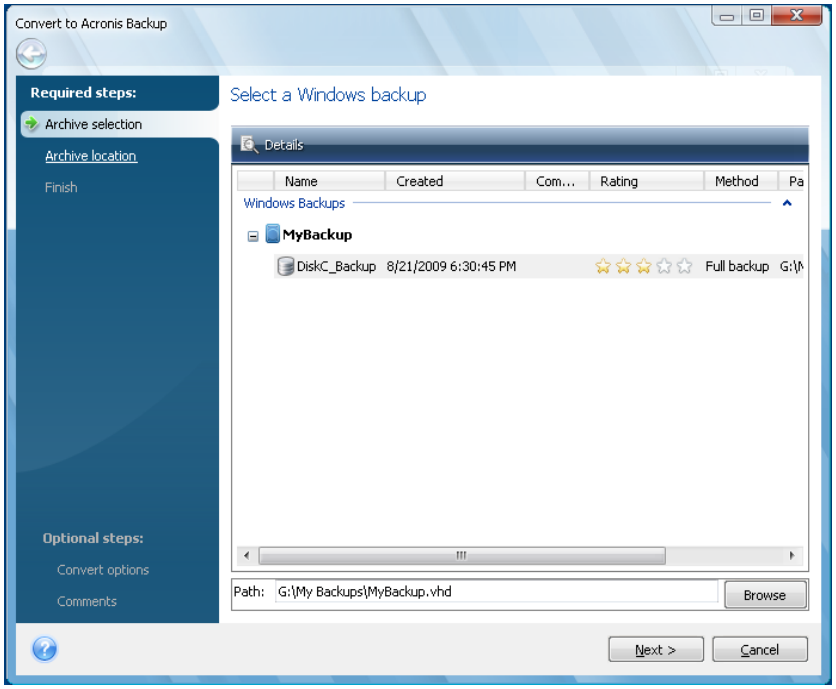
Acronis True Image Home cannot convert tib files containing images of spanned and striped dynamic volumes.

16.1.2. Converting to Acronis backup

Windows Vista and Windows 7 users can convert vhd files created by Windows Backup into tib archives. This may be needed if you want to keep the earlier Windows Backup files, but decide to convert them into tib files to save storage space as converted tib files are smaller than the corresponding vhd files due to compression.

The virtual to physical conversion is done as follows:

1. Select **Tools & Utilities** → **Convert Windows backup** in the main program menu.



2. Select the vhd disk file to convert.
3. Specify the path to the tib file to be created.

   By default the converted file will be created in the same location as the file to be converted, but you can select another location by clicking **Browse**. The file can be directed to any storage supported by Acronis True Image Home, except for Acronis Secure Zone.
4. The next step allows you to set options for the tib backup to be created. You can protect the archive with a password and encryption, select a desired compression level, as well as split the backup, for example, for later burning to DVDs.
5. Add comments to the archive, if you wish.
6. Click **Proceed** in the Summary window.

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Acronis True Image Home cannot convert vhd files containing dynamic volumes which were originally located on more than one disk drive (striped or spanned on two or more disk drives).

16.2. Recovery using vhd files created by Windows Backup

If you used Windows Backup utility included into Windows Vista (except Home editions) and Windows 7 operating systems for backing up the system hard drive and later purchased Acronis True Image Home, you can recover your system hard drive from those Windows Backup utility backups (vhd files) using Acronis True Image Home. So, when you need to recover your system using a vhd backup file, proceed as follows:

1. Arrange the boot sequence in BIOS so as to make your rescue media device (CD, DVD or USB stick) the first boot device. See Arranging boot sequence in BIOS (p. 192).
2. Boot from the rescue media and select Acronis True Image Home (Full version).
3. After Acronis True Image Home starts, click the **My Disks** link under **Recover** on the Welcome screen and the Restore Wizard will start.
4. Choose the vhd backup file to be used for recovery by its creation date (if you have not added descriptions to vhd archives using the **Edit Comments** feature of Acronis True Image Home). When the required vhd backup is not shown, click **Browse**, choose Windows Backup Archives (*.vhd) in the "Files of type" field and locate the backup for recovery.

   *Even if the required vhd backup is shown on the screen, after you choose it Acronis True Image Home may display the following message: "Acronis True Image Home cannot detect volume 1 of "Backup_Name" archive", where Backup_Name is the name of the chosen backup. This is because disk letters in the standalone Acronis True Image Home may differ from those in Windows and the path to this backup stored in the metadata information database will point to the wrong location. In such case also click **Browse**, choose Windows Backup Archives (*.vhd) in the "Files of type" field and locate the backup for recovery.*
5. At the next step select **Recover whole disks and partitions** (if it is not selected) and click **Next**.
6. Select the system partition at the **What to recover** step. Usually you will not need to recover the MBR.
7. Then specify the settings of the selected system partition: location, type (primary, active) and size. When recovering the partition to the original location, you do not need to make any setting changes.
8. Read the Summary of the recovery operations and then click **Proceed**.

You can also recover partitions and disks from vhd files while working in Windows. This is preferable for recovering data partitions and disks.

16.3. Booting from a tib image of your Windows 7 system partition

As already mentioned, users of the Enterprise and Ultimate editions of Windows 7 can boot from tib images of Windows 7 system partition, thus testing bootability of the backed up system without actual recovery. This can be done only when running Acronis True Image Home in Windows.

If you have Windows 7 Enterprise or Ultimate installed and want to test whether your Windows 7 system partition backup will recover to a bootable operating system, proceed as follows:

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1. Open Acronis Boot Sequence Manager by selecting **Tools & Utilities** → **Acronis Boot Sequence Manager** in the main program menu.
2. Click **Add** on the toolbar of Acronis Boot Sequence Manager and browse for the required tib file, then click **OK**.
3. As actual booting is performed from VHD, the program needs to convert the selected tib file, so the appropriate dialog will appear.
4. Click **OK** if you want to save the converted file to the default location with the same name or browse for another location. Saving to another location allows changing the name of the vhd file.

   If there is not enough space for the converted file in the selected location, the program will notify you. You can delete unnecessary files and click **Retry** or cancel the conversion and repeat the operation choosing another location for the converted file.
5. After the conversion process finishes a new line with the vhd filename will be added to the Acronis Boot Sequence Manager.

   To use the VHD for booting, the partition with the converted vhd file must have sufficient free space. Tib files are converted into dynamic VHDs with the maximum size that equals the size of a partition backed up into a tib file. When you boot from a dynamic vhd file, the VHD is automatically expanded to the maximum size. If the physical host partition of the vhd file does not have enough free disk space for the maximum size of the dynamic VHD, the boot process will fail. Furthermore, you need to have additional space for the paging file (Pagefile.sys), as the paging file is created on the host partition outside the virtual one. Microsoft states that you should estimate approximately 5 GB of available space in addition to the maximum size of the vhd file. So the estimated free space is the size of your system partition plus 5 GB. Incidentally, from the above it follows that you cannot boot from the vhd file if it is located on your system partition.
6. Reboot the computer and select the new entry in the Acronis Boot Sequence Manager list for booting, then click **OK**. If Windows boots normally, you can be quite sure that the backup will recover to a bootable Windows 7 operating system.
7. After making sure that the tib image is bootable, you can remove its entry from the Acronis Boot Sequence Manager list. To do so, select the entry and click **Remove** on the toolbar. Acronis True Image Home will ask to confirm removal. You may also want to delete the vhd file used for booting. If so, open Windows Explorer and delete the file.

16.4. Acronis Boot Sequence Manager

Acronis Boot Sequence Manager allows you to add Windows 7 system partition images to the booting list and then manage the list.

You can add to the list images backed up both in the vhd and tib formats. Adding a tib image requires converting it into the vhd format. More detailed information on booting from tib images is provided in the previous section.

Actual booting is carried out using Windows boot loader. Acronis Boot Sequence Manager just adds virtual disks (vhd files) to the Windows boot loader' list of disks available for booting to Windows 7.

If you do not select from where to boot, then by default the computer boots from the first entry in the booting list after waiting for a time interval specified in the Boot Timeout field. To change the default boot disk (either physical or virtual), you can move entries up and down in the list using the corresponding buttons on the toolbar.

Clicking the **Rename** button allows you to assign a desired name to a list entry.

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When you no longer need an entry in the list, you can remove it by clicking **Remove** on the toolbar.

The **Remove all** button allows you to remove all entries related to virtual disks and restore the original booting configuration.

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17. Exploring archives and mounting images

Acronis True Image Home offers two kinds of archive contents management: mounting for images and exploring for both images and file-level archives.

Exploring images and file-level archives lets you view their contents and copy the selected files to a hard disk. To explore a backup archive, double-click on the corresponding tib file. You can also right-click on the file and choose **Explore** in the shortcut menu.

When you copy files from a backup being explored, the copied files lose the "Compressed" and "Encrypted" attribute. If you need to keep these attributes, it is recommended to recover the backup.

Mounting images as virtual drives lets you access them as though they were physical drives. Such ability means that:

- a new disk with its own letter will appear in the drives list
- using Windows Explorer and other file managers, you can view the image contents as if they were located on a physical disk or partition
- you will be able to use the virtual disk in the same way as the real one: open, save, copy, move, create, delete files or folders. If necessary, the image can be mounted in read-only mode.

The operations described in this chapter are supported only for the FAT and NTFS file systems.

Please keep in mind that, though both file archives and disk/partition images have a default ".tib" extension, only **images** can be mounted. If you want to view file archive contents, use the Explore operation. The following is a brief summary of the Explore vs Mount operation:

	Explore	Mount
Archive type	File-level, disk or partition image	Partition image
Assigning a letter	No	Yes
Archive modification	No	Yes (in R/W mode)
File extraction	Yes	Yes

17.1. Mounting an image

1. Start the **Mount Wizard** by selecting **Tools & Utilities** → **Mount Image** in the main program menu or by right-clicking on an image archive on the **Data recovery and backup management** screen and selecting **Mount Image** in the shortcut menu.

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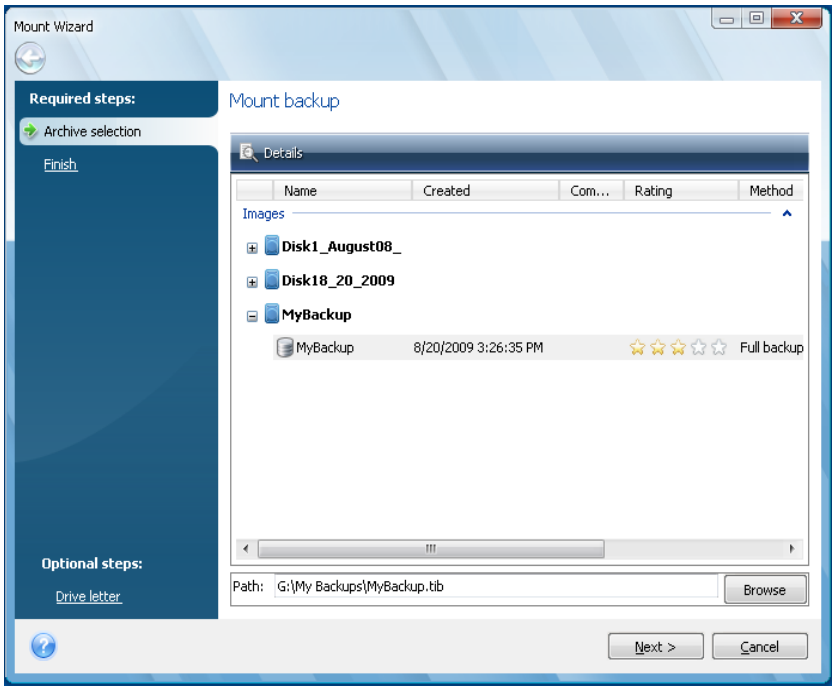
2. Select the archive for mounting.

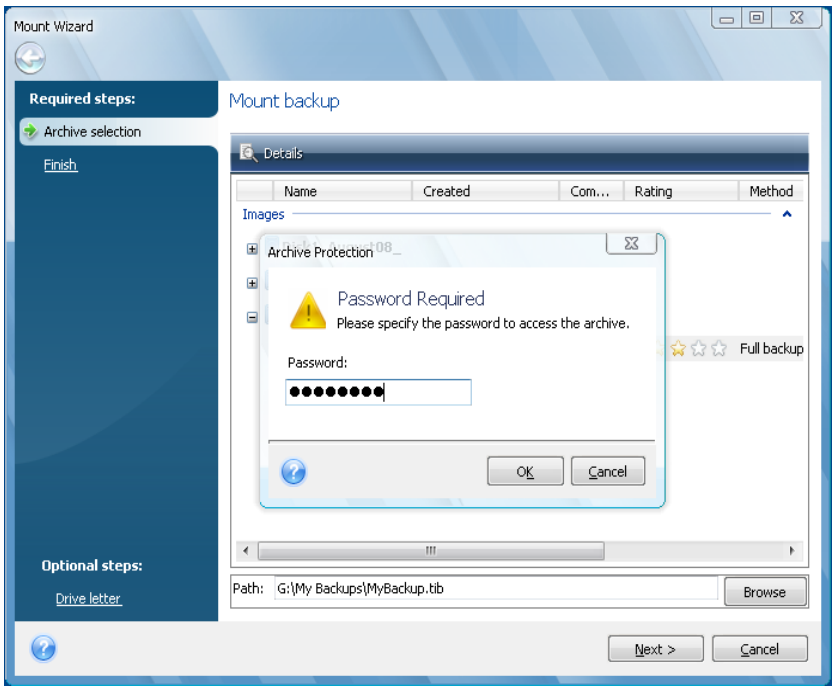


If you selected an archive containing incremental images, you can select one of the successive incremental images (also called "slices") by its creation date/time. Thus, you can explore the data state at a certain moment.

To mount an incremental image, you must have all previous images and the initial full image. If any of the successive images are missing, mounting is not possible. By default the program will mount the latest incremental image

To mount a differential image, you must have the initial full image as well.

If the archive was password-protected, Acronis True Image Home will ask for the password in a dialog box. Neither the partitions layout will be shown, nor will the **Next** button be enabled until you enter the correct password.



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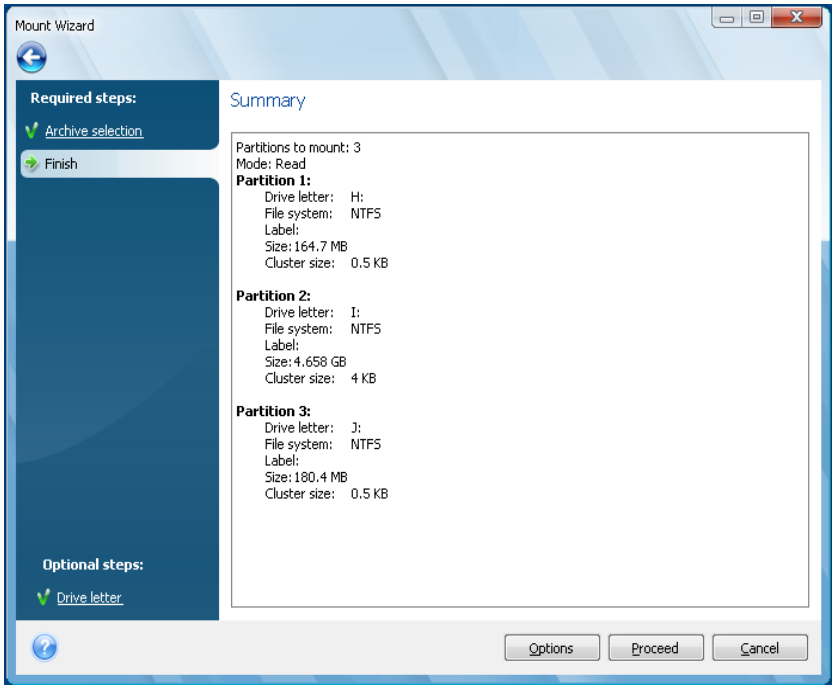
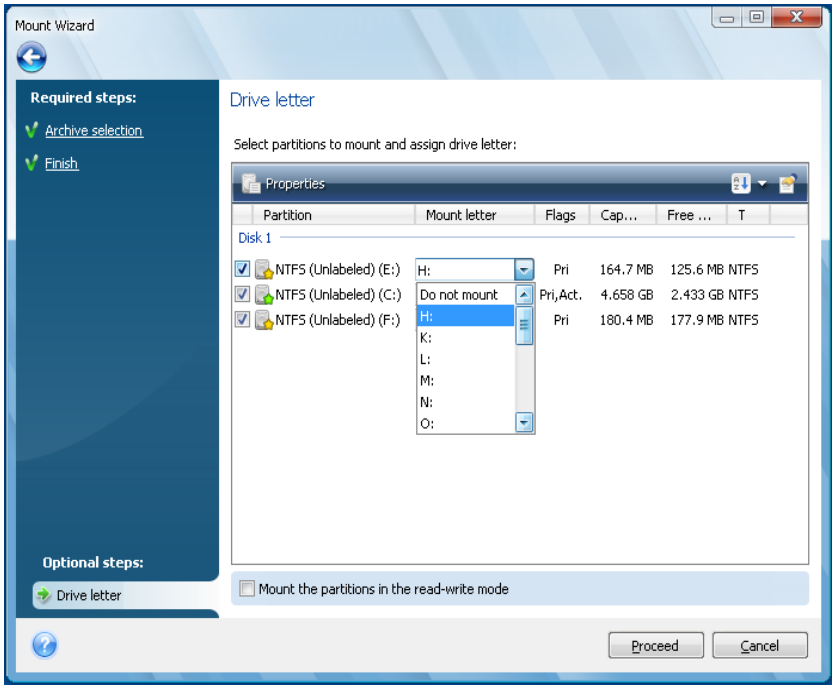
3. Select a partition to mount as a virtual disk. (Note that you cannot mount an image of the entire disk except in the case when the disk consists of one partition). If the image contains several partitions, by default all of them will be selected for mounting with automatically assigned drive letters. If you would like to assign different drive letters to the partitions to be mounted, click **Options**.



You can also select a letter to be assigned to the virtual disk from the **Mount letter** drop-down list. If you do not want to mount a partition, select **Do not mount** in the list or unselect the partition's checkbox.



4. If you select the **Mount the partitions in the read-write mode** box, the program assumes that the mounted image will be modified and creates an incremental archive file to capture the changes.

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It is strongly recommended that you list the forthcoming changes in the Comments section to this file. For you to be able to make comments, the optional Comments step appears in the wizard.

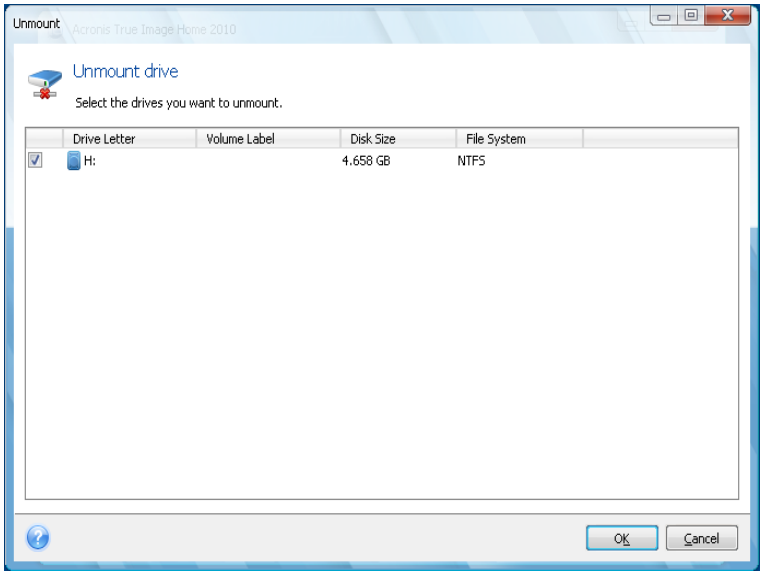
5. Having finished the settings, click **Proceed** to connect the selected partition images as virtual disks.
6. After the image is connected, the program will run Windows Explorer, showing its contents. Now you can work with files or folders as if they were located on a real disk.

17.2. Unmounting an image

We recommend that you unmount the virtual disk after all necessary operations are finished, as maintaining virtual disks takes considerable system resources. If you do not unmount the disk, it will disappear after your computer is turned off.

To disconnect the virtual disk, choose **Tools & Utilities** → **Unmount Image**, select the disk to unmount and click **OK**.

If you have mounted several partitions, by default all of them will be selected for unmounting. You can disconnect all mounted drives together or disconnect only those you do not need mounted anymore.



You can also do this in Windows Explorer by right-clicking on the disk icon and choosing **Unmount**.

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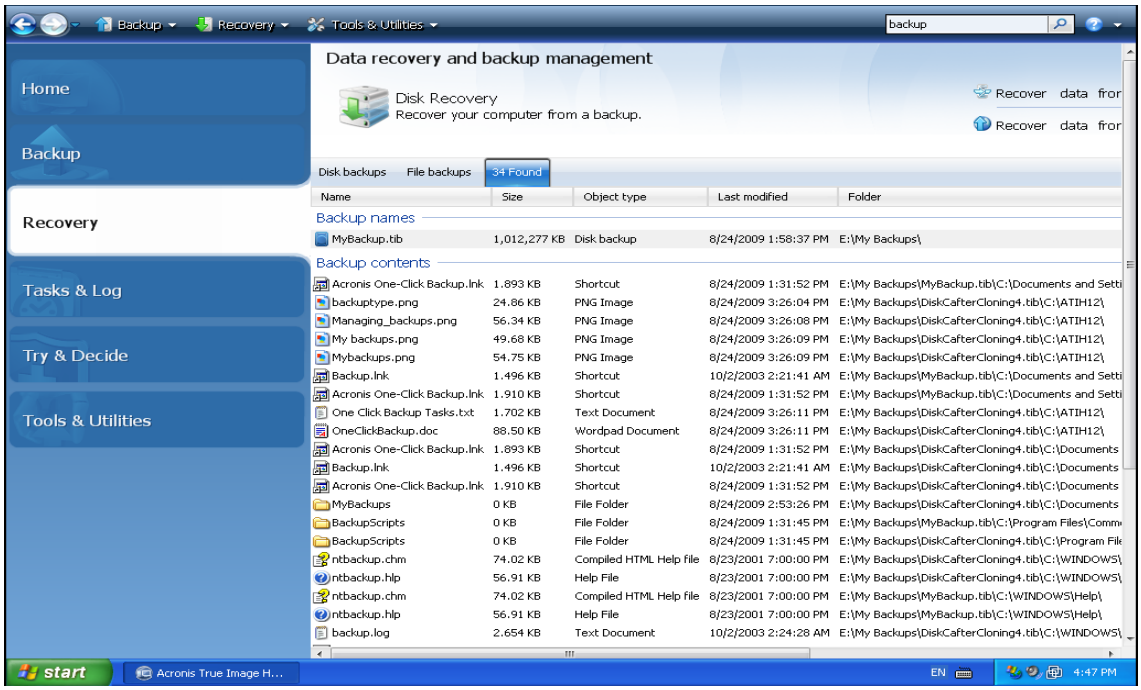
18. Searching backup archives and their content

18.1. Searching

In addition to the ability to explore backup archives, Acronis True Image Home provides a search facility for tib and zip archives themselves, for files in tib archives only, as well as offering full-text search in the comments to archives. This facilitates searching for the information you need for using Acronis True Image Home and for recovering files from your backup archives. Here's how you can search for the data you need.

1. Enter a search string into the Search field at the top right of the Acronis True Image Home window and then click the magnifying glass icon. You will be taken to the **Data recovery and backup management** screen. The search results are output in the corresponding tab of the window.


Backup
Recovery
Tools & Utilities
backup
Home
Backup
Recovery
Tasks & Log
Try & Decide
Tools & Utilities
Data recovery and backup management
Disk Recovery
Recover your computer from a backup.
Recover data fror
Recover data fror
Disk backups
File backups
34 Found
Name
Size
Object type
Last modified
Folder
Backup names
MyBackup.tib 1,012,277 KB Disk backup 8/24/2009 1:58:37 PM E:\My Backups\
Backup contents
Acronis One-Click Backup.lnk 1.893 KB Shortcut 8/24/2009 1:31:52 PM E:\My Backups\MyBackup.tib\C:\Documents and Setti
backuptype.png 24.86 KB PNG Image 8/24/2009 3:26:04 PM E:\My Backups\DiskCafterCloning4.tib\C:\ATIH12\
Managing_backups.png 56.34 KB PNG Image 8/24/2009 3:26:08 PM E:\My Backups\DiskCafterCloning4.tib\C:\ATIH12\
My backups.png 49.68 KB PNG Image 8/24/2009 3:26:09 PM E:\My Backups\DiskCafterCloning4.tib\C:\ATIH12\
Mybackups.png 54.75 KB PNG Image 8/24/2009 3:26:09 PM E:\My Backups\DiskCafterCloning4.tib\C:\ATIH12\
Backup.lnk 1.496 KB Shortcut 10/2/2003 2:21:41 AM E:\My Backups\MyBackup.tib\C:\Documents and Setti
Acronis One-Click Backup.lnk 1.910 KB Shortcut 8/24/2009 1:31:52 PM E:\My Backups\MyBackup.tib\C:\Documents and Setti
One Click Backup Tasks.txt 1.702 KB Text Document 8/24/2009 3:26:11 PM E:\My Backups\DiskCafterCloning4.tib\C:\ATIH12\
OneClickBackup.doc 88.50 KB Wordpad Document 8/24/2009 3:26:11 PM E:\My Backups\DiskCafterCloning4.tib\C:\ATIH12\
Acronis One-Click Backup.lnk 1.893 KB Shortcut 8/24/2009 1:31:52 PM E:\My Backups\DiskCafterCloning4.tib\C:\Documents
Backup.lnk 1.496 KB Shortcut 10/2/2003 2:21:41 AM E:\My Backups\DiskCafterCloning4.tib\C:\Documents
Acronis One-Click Backup.lnk 1.910 KB Shortcut 8/24/2009 1:31:52 PM E:\My Backups\DiskCafterCloning4.tib\C:\Documents
MyBackups 0 KB File Folder 8/24/2009 2:53:26 PM E:\My Backups\DiskCafterCloning4.tib\C:\Documents
BackupScripts 0 KB File Folder 8/24/2009 1:31:45 PM E:\My Backups\MyBackup.tib\C:\Program Files\Comm
BackupScripts 0 KB File Folder 8/24/2009 1:31:45 PM E:\My Backups\DiskCafterCloning4.tib\C:\Program Fil
ntbackup.chm 74.02 KB Compiled HTML Help file 8/23/2001 7:00:00 PM E:\My Backups\DiskCafterCloning4.tib\C:\WINDOWS\
ntbackup.hlp 56.91 KB Help File 8/23/2001 7:00:00 PM E:\My Backups\DiskCafterCloning4.tib\C:\WINDOWS\
ntbackup.chm 74.02 KB Compiled HTML Help file 8/23/2001 7:00:00 PM E:\My Backups\MyBackup.tib\C:\WINDOWS\Help\
ntbackup.hlp 56.91 KB Help File 8/23/2001 7:00:00 PM E:\My Backups\MyBackup.tib\C:\WINDOWS\Help\
backup.log 2.654 KB Text Document 10/2/2003 2:24:28 AM E:\My Backups\DiskCafterCloning4.tib\C:\WINDOWS\
start
Acronis True Image H...
EN
4:47 PM

2. By default the search is performed in all the sources where Acronis True Image Home can search information. You can select an information source of interest by choosing the appropriate area among **Backup names** and **Backup contents**.

*Acronis True Image Home cannot perform search on network shares, Acronis Online Storage, Nonstop backup storages, and devices that are recognized by Windows as **Devices with removable storage**.*

- The **Backup names** area shows the results of the search for tib and zip archives by archive filename. Double-clicking on a filename opens the corresponding archive in Windows Explorer where you can explore the archive contents. You can validate or recover the archive by right-clicking on its filename and choosing the appropriate item in the shortcut menu. The shortcut menu contains the following items: **Recover**, **Update**, **Mount** (for image backups), **Validate**, **Move**, **Remove**, **Consolidate, Explore backup, Convert Acronis backup** (or **Convert Windows backup** for vhd archives)**, Edit Comments,** and **Details** buttons for tib archives, or **Recover**, **Validate**, **Move**, **Remove, Update backup, Edit Comments,** and **Details** buttons for zip archives.

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- The **Backup contents** area shows results of searches for files and folders in tib archives. Double-clicking on a filename opens the file. You can recover the file by right-clicking on its filename and choosing Recover in a shortcut menu. This shortcut menu also enables you to open the file or the parent folder that contains that file.

To help you better understand the search results, here is some information on the algorithms used by the Search feature.

1. When searching files in tib archives you can type all or part of the filename and use the common Windows wildcard characters. For example, to find all batch files in the archives, type "*.bat". Typing my???.exe will allow you to find all .exe files with names consisting of five symbols and starting with "my". It should be noted that search is case-insensitive, i.e. "Backup" and "backup" is the same search string. Furthermore, the search stops after the program finds 100 files corresponding to a search criterion you have typed. If the search results do not contain the file you need, you will have to refine the search criterion.

   Please note that Acronis True Image Home does not search files in encrypted and password-protected tib archives nor in the password-protected Acronis Secure Zone. In addition, the program does not search files in zip backup archives created by Acronis True Image Home.

   *****

   *When a file is included in several backups and it has not been modified, the search results will show it only once in the oldest backup file. If such a file has been changed, the search results will show all backup files containing **differing** versions of the file.*

2. Search in the comments to backup archives is carried out differently. First of all, you cannot use "*" and "?" as Windows wildcard characters. As in this case the program uses full text search, it will just find all occurrences of these characters in the comments (if any). The full text search uses the following rules:

- Search criteria consist of words separated by space character(s) or by a logical operator: "AND", "OR", "NOT" (please, take note of the upper case).
- Only one logical operator is allowed (the first one that occurs in a search string), otherwise they are ignored and interpreted as search words.
- All space-separated words must be in a topic for successful match.

The **Backup names** area shows the archive files whose comments satisfy the search criterion. Double-clicking on an archive opens it for exploring.

18.2. Windows Search and Google Desktop integration

Acronis True Image Home has plug-ins for Google Desktop and Windows Search (WDS). If you use any of these search engines on your computer, Acronis True Image Home will detect the search engine you use and install an appropriate plug-in for indexing your tib backup archives. Indexing of backups will speed up searches in the backup archives. After such indexing you will be able to search archive content by entering a filename into the Google Desktop or Windows Search deskbar query field without opening Acronis True Image Home. The search results will be shown in a browser window. Using the search results you can:

- Select any file and open it for viewing and/or save that file back to anywhere in the file system (not in the archive) or where it was before
- See in which archive a given file is stored and recover that archive

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Google Desktop has a "Quick Find" window. This window is filled with the most relevant results from your computer. The results change as you type, so you can quickly get to what you want on your computer. Windows Search provides similar functionality.

In addition to indexing the files in backup archives by their names, the Google Desktop and Windows Search provide Acronis True Image Home with the ability to perform full-text indexing of many files in tib archives, so you will be able to use this feature and perform searches of the files' content.

Full-text indexing of files in backup archives is provided only for the file types recognizable by Google Desktop and Windows Search. They recognize text files, Microsoft Office files, all Microsoft Office Outlook and Microsoft Outlook Express items, and more.

*****

The contents of password-protected tib backup archives or archives protected by a password and encryption, as well as the System State and My E-mail backup archives will not be indexed, though Google Desktop and Windows Search provide search for the tib files themselves and in the comments to such archives. Furthermore, Google Desktop and Windows Search have no access to Acronis Secure Zone, so these search engines will be unable to search and index archives in the zone.

18.2.1. Using Google Desktop with Acronis True Image Home

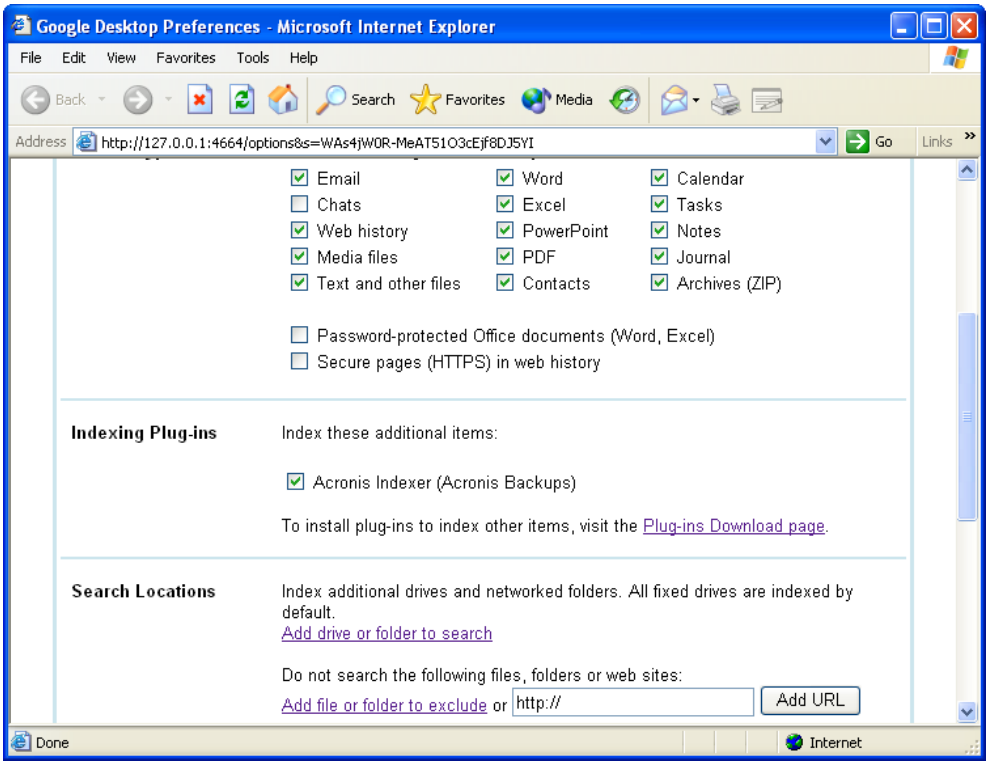
If you do not have Google Desktop, it can be downloaded for free from Google's Web site. Click Google Desktop and follow the instructions for download and installation.

To enable using Google Desktop for searching files in tib archives:

1. To install the plug-in, choose **Tools & Utilities** on the sidebar. Then click **Search settings** on the right pane and select the appropriate check box in the Desktop Search Options window. The following window appears.

Third Party Plug-in Installation
Google has not tested or verified the features or security of this third party Plug-in. Please confirm that you want to install:
Acronis Indexer
Description: Acronis Backups
OK
Cancel

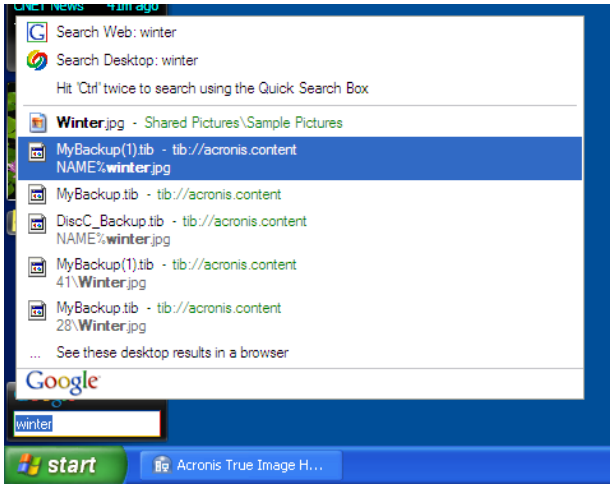
2. Verify that the plug-in is installed. Right-click on the Google Desktop icon in your system tray and select **Options** in the context menu. Google Desktop opens the **Preferences** window in your browser. Make sure that Acronis **Indexer (Acronis Backups)** is selected in the **Indexing Plug-ins** area.



3. Right-click on the Google Desktop icon in your system tray once more and select **Indexing** → **Re-Index**. Click **Yes** in the confirmation window that appears. Google Desktop will add all the new content to the existing index.

Give Google Desktop some time for indexing all tib files on your computer's hard disks and adding the indexing information to its index database. The required time depends on the number of tib archives and the number of files they contain.

After for example an hour, check whether Google Desktop has indexed the tib archives by entering in its query field the name of a file which you know for sure that you backed up. If Google Desktop has completed indexing, it will show you the tib archives where it has found the file.



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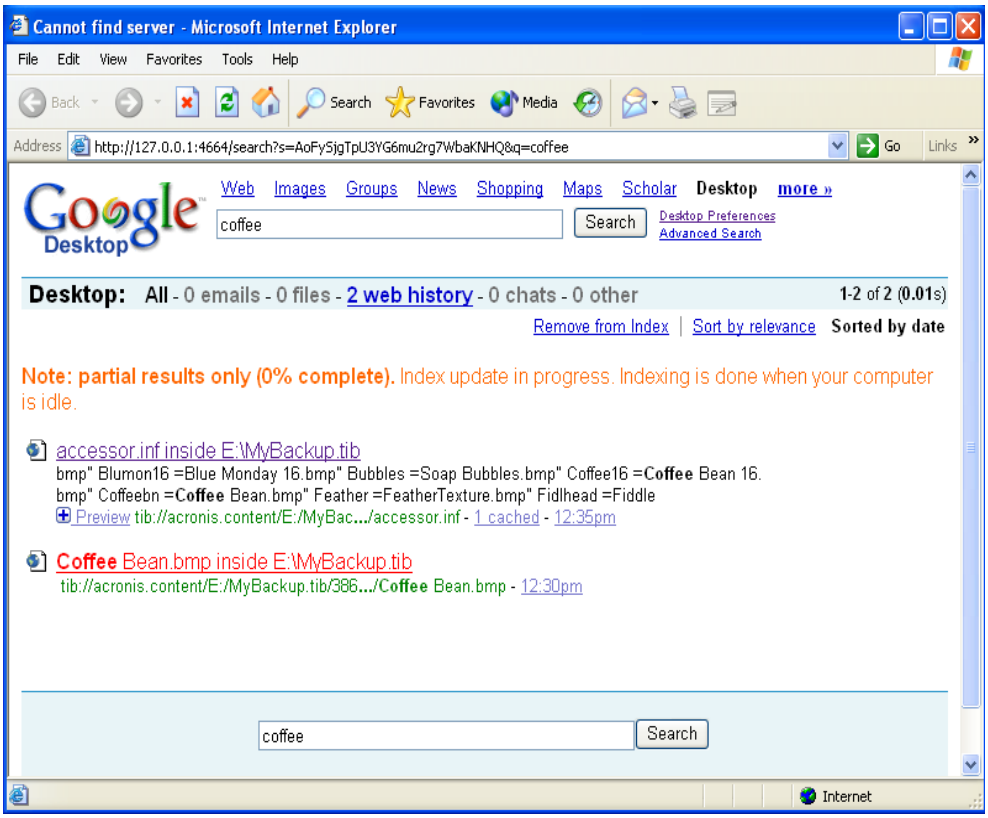
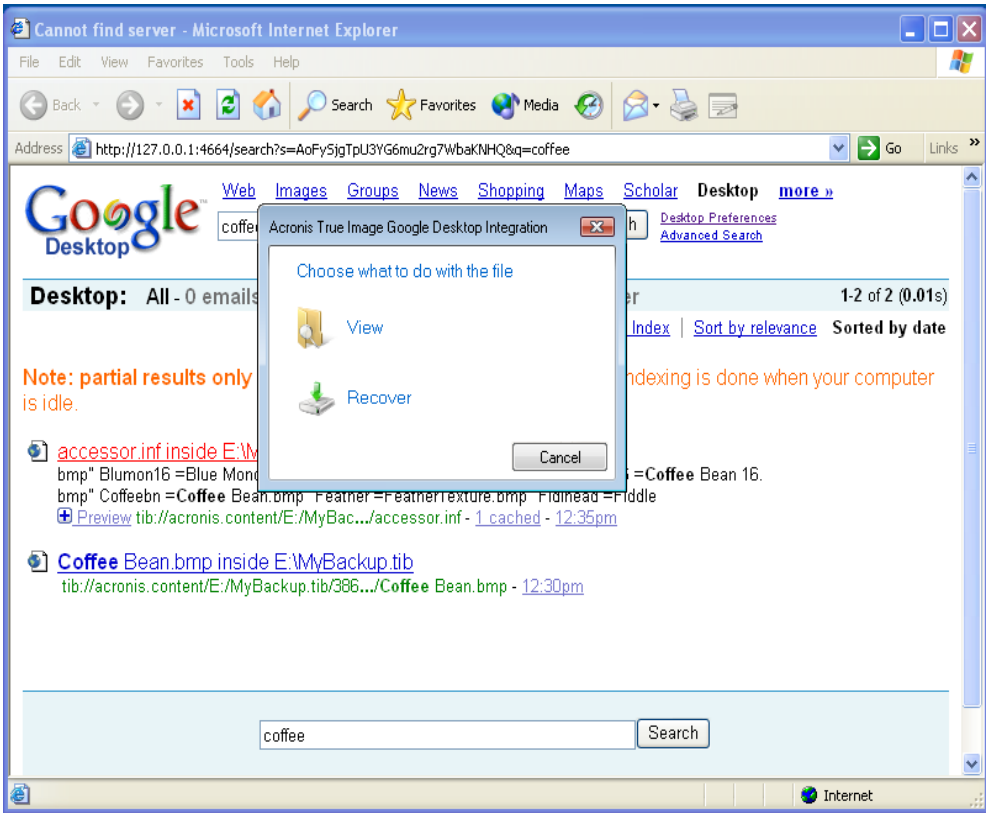
If you want to see all the search results, click the "See all N results in a browser" and you will see something like the screen shot below.


Cannot find server - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Search Favorites Media
Address http://127.0.0.1:4664/search?s=AoFySjgTpU3YG6mu2rg7WbaKNHQ&q=coffee
Go Links
Google Desktop
Web Images Groups News Shopping Maps Scholar Desktop more »
coffee
Search
Desktop Preferences
Advanced Search
Desktop: All - 0 emails - 0 files - 2 web history - 0 chats - 0 other
1-2 of 2 (0.01s)
Remove from Index | Sort by relevance Sorted by date
Note: partial results only (0% complete). Index update in progress. Indexing is done when your computer is idle.
accessor.inf inside E:\MyBackup.tib
bmp" Blumon16 =Blue Monday 16.bmp" Bubbles =Soap Bubbles.bmp" Coffee16 =Coffee Bean 16.
bmp" Coffeebn =Coffee Bean.bmp" Feather =FeatherTexture.bmp" Fidlhead =Fiddle
Preview tib://acronis.content/E:/MyBac.../accessor.inf - 1 cached - 12:35pm
Coffee Bean.bmp inside E:\MyBackup.tib
tib://acronis.content/E:/MyBackup.tib/386.../Coffee Bean.bmp - 12:30pm
coffee
Search
Internet

Clicking in the browser window on a line related to the desired file version opens a small dialog with just two options: **View** and **Recover**.



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Choosing **View** starts the application associated with this file type and opens the file. Choosing **Recover** starts Acronis True Image Home and you can then recover the file to a desired location.

Google Desktop also provides for searching files in zip backup archives, created by Acronis True Image Home, though you cannot open or recover files from zip archives by clicking on a line with a filename in the browser window. To recover files found in zip backup archives by Google Desktop, use Acronis True Image Home's Recovery feature.

18.2.2. Using Windows Search with Acronis True Image Home

If you use any edition of Windows Vista that has built-in Desktop Search functionality or Windows Desktop Search 3.0 or later, you can enable Windows Search support for tib files.

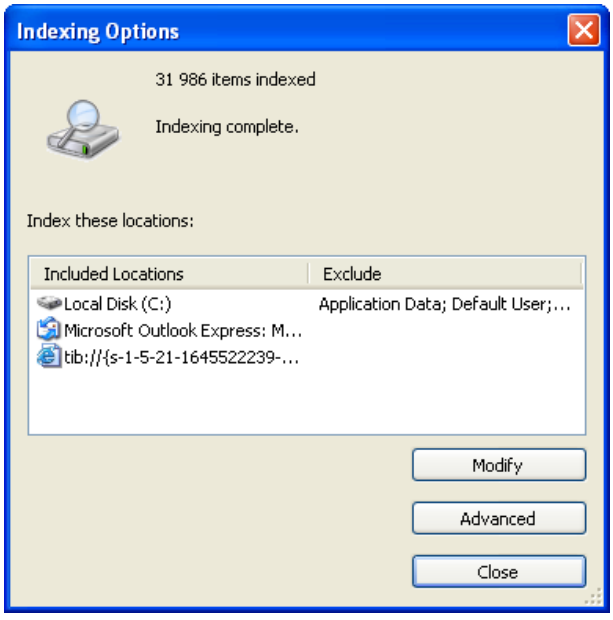
If you do not have Windows Search installed, but would like to use it, you can download Windows Search 4.0 for free from Microsoft's Web site. To download, click Windows Search 4.0. Double-click on the downloaded file and follow the instructions for installation.

Windows Search does not support indexing of zip files content.

To use Windows Search support:

1. To register the plug-in, choose **Tools & Utilities** on the sidebar. Click **Search settings** on the right pane and select the appropriate check box in the Desktop Search Options window. After successful registration of the plug-in Acronis True Image Home will display the "Plug-in registration succeeded" information window.
2. You can verify that the tib support is enabled. Right-click on the Windows Search icon in your system tray and select **Windows Desktop Search Options...** in the context menu. The following window appears. Make sure that the "tib://..." item is present in the Included Locations list.

   *To open the Indexing Options window in Windows Vista, open the Control Panel and then double-click the **Indexing Options** icon. The Windows Vista indexing options have some differences in content and appearance, though most of the following information is applicable to Windows Vista as well.*



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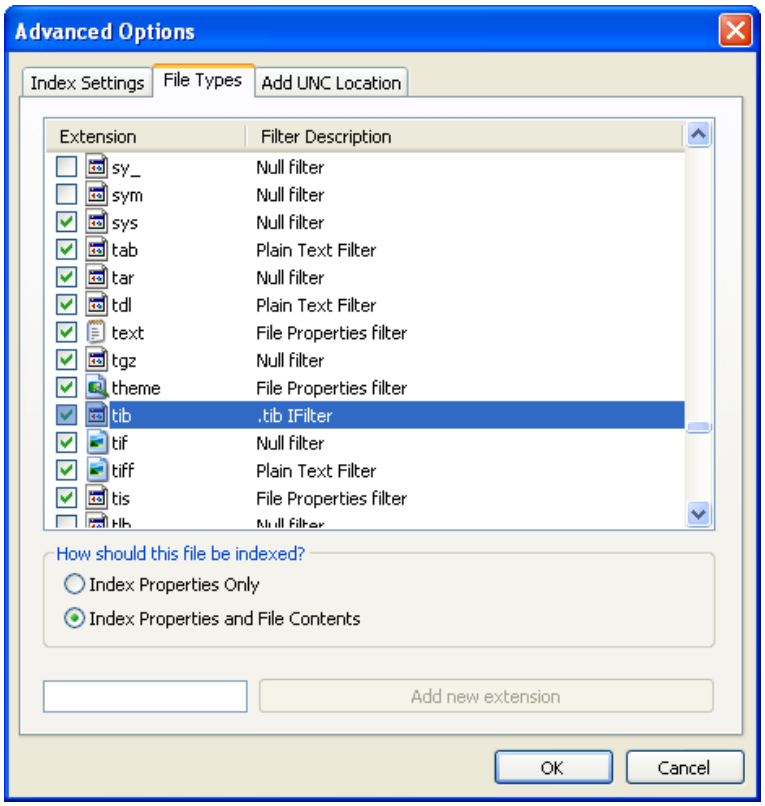
3. Click **Advanced**, select the **File Types** tab and then make sure that the **tib** extension is selected and ".tib IFilter" is shown in the Filter Description field. **Select Index Properties and File Contents**.



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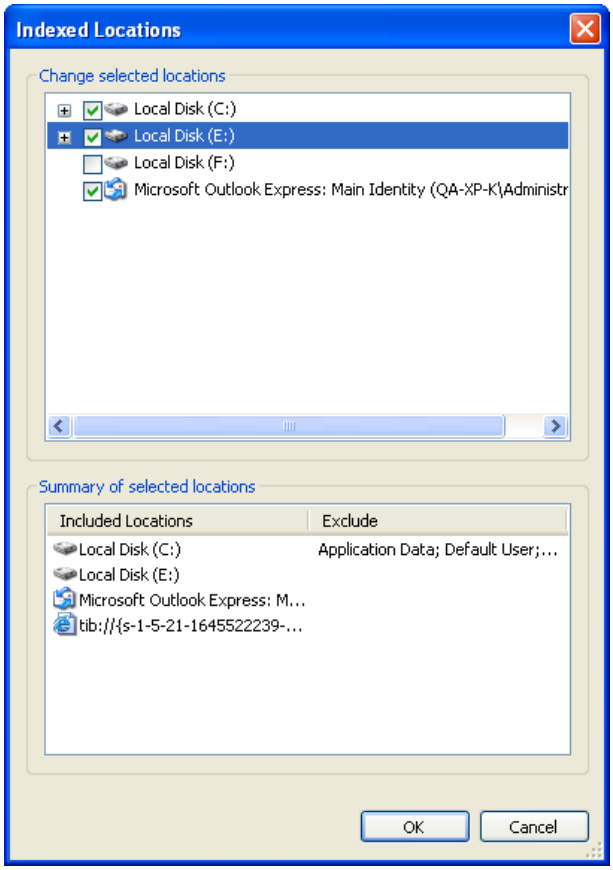
4. Click **OK** and while the **Indexing Options** window is open, check that the disks where you store your tib backup archives are shown in the "Included Locations" list. If the list does not contain those disks, the tib files will not be indexed. To include the disks, click **Modify** and select them in the window that appears.



*If you store backups on a network share, Windows Search can index them too. You just have to add the share to the Indexed Locations list by typing the appropriate UNC path after selecting the **Add UNC Location** tab of **Advanced Options**.*

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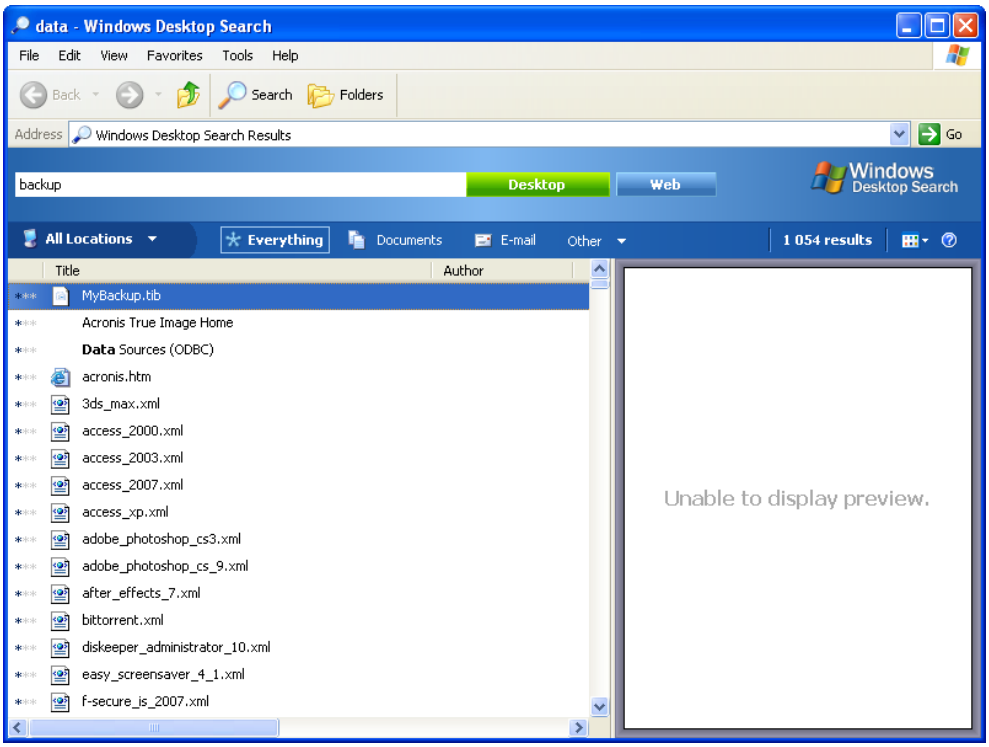
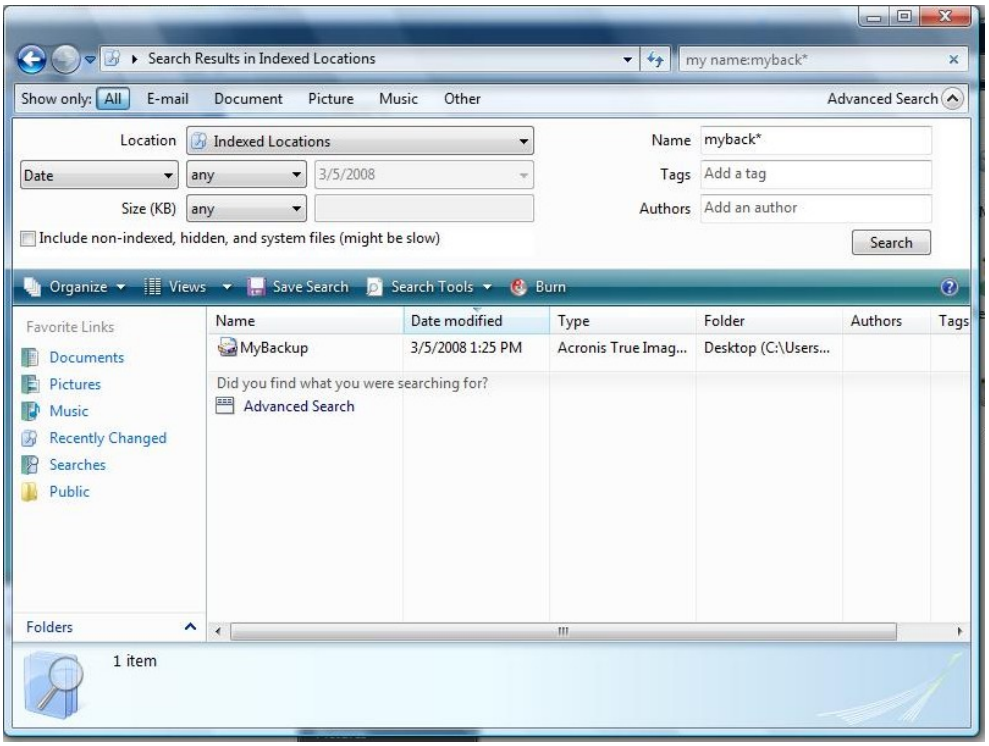
Give Windows Search some time for indexing all tib files on your computer's hard disks and adding the indexing information to its index database. The required time depends on the number of tib archives and the number of files they contain. After completing the indexing, the Desktop Search will be able to search files in tib backup archives. The search engines in WDS and Windows Vista have similar functionalities, though search results are presented somewhat differently:



Windows Search results



Windows Vista search results

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19. Other operations

19.1. Validating backup archives

The validation procedure checks whether you will be able to recover data from a particular backup, so when you select for validation…

- a full backup, the program validates the full backup only.
- a differential backup, the program validates the initial full backup and the selected differential backup.
- an incremental backup, the program validates the initial full backup, the selected incremental backup, and the whole chain (if any) of backups to the selected incremental backup. If the chain contains one or more differential backups, the program validates (in addition to the initial full backup and the selected incremental backup) only the most recent differential backup in the chain and all subsequent incremental backups (if any) between the differential backup and the selected incremental backup.

This information can be helpful, for example, when you find out that a backup archive comprising a full backup and a chain of incremental ones is corrupted. To troubleshoot the archive, do as follows. First of all validate the full backup. If it is damaged, all the archive will be useless. When it is not damaged, proceed to validating incremental backups starting from the oldest, until you find the culprit. All incremental backups made after the corrupted one will be unusable, but you will be able to recover the data at least from the previous backups.

You can perform such validations using the **Validate Wizard**.

1. To validate an archive, click **Recovery** on the sidebar.
2. Select the archive to validate and click **Validate** on the toolbar. If the selected archive is password-protected, Acronis True Image Home will ask for the password in a dialog box.

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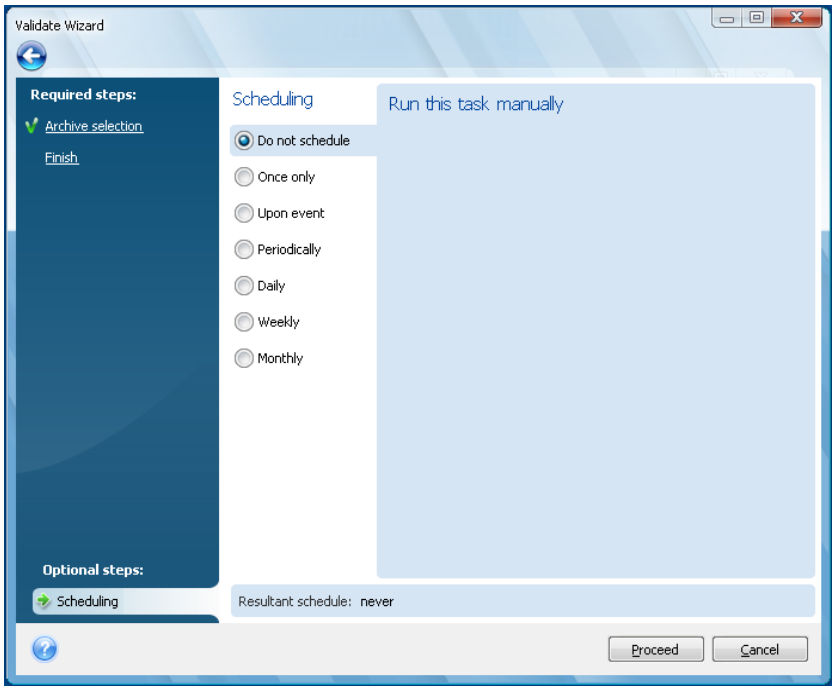
3. After entering the correct password you will be taken to the Scheduling step, where you can schedule validation of the backup or leave the default setting **Do not schedule**.



4. Clicking **Proceed** will start the validation procedure. If you have decided to validate the backup archive on schedule, the validation will proceed according to the schedule you set. After the validation is complete, you will see the results window. You can cancel validation by clicking **Cancel**.

19.2. Operation results notification

Sometimes a backup or recovery procedure can last an hour or longer. Acronis True Image Home can notify you when it is finished using the WinPopup service or via e-mail. The program can also duplicate messages issued during the operation or send you the full operation log after operation completion.

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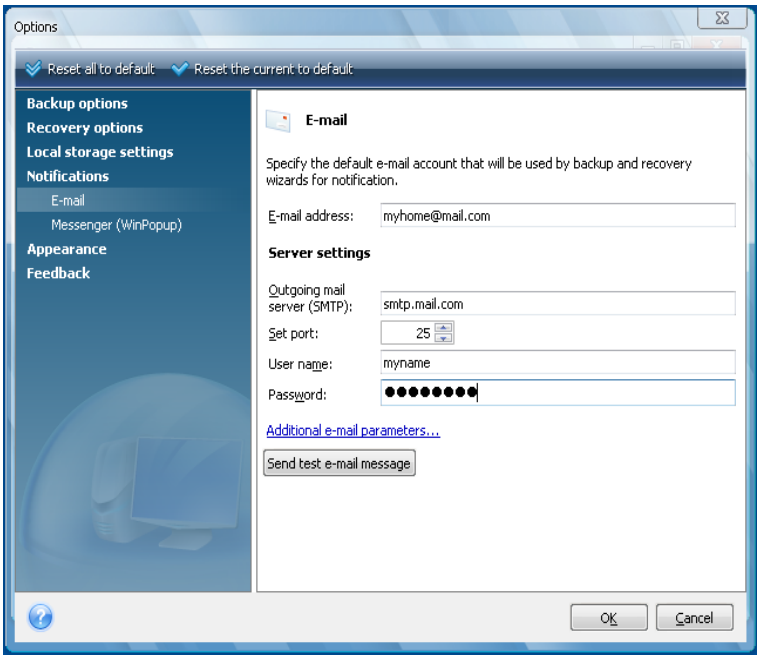
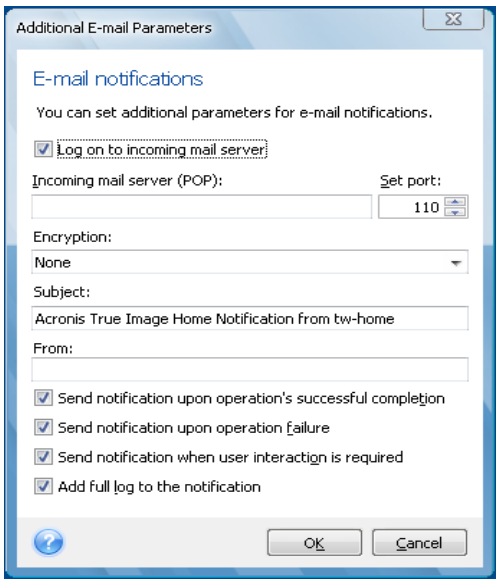
19.2.1. E-mail notification

To set up e-mail notification, select **Tools & Utilities** → **Options** → **Notifications** → **E-mail**:



Provide the e-mail address to which notifications will be sent as well as the outgoing SMTP server name and port. A user name and a password might also be needed if the SMTP server requires user authentication.

To set up the additional e-mail parameters, click **Additional e-mail parameters…**



If the outgoing SMTP server requires logging on to an incoming mail server before it allows sending outgoing messages, enter the necessary information for the incoming mail server.

At the bottom of this window you can choose whether you want to get notifications:

- when the operation is completed successfully (check **Add full log to the notification** to add the full operation log to the message)

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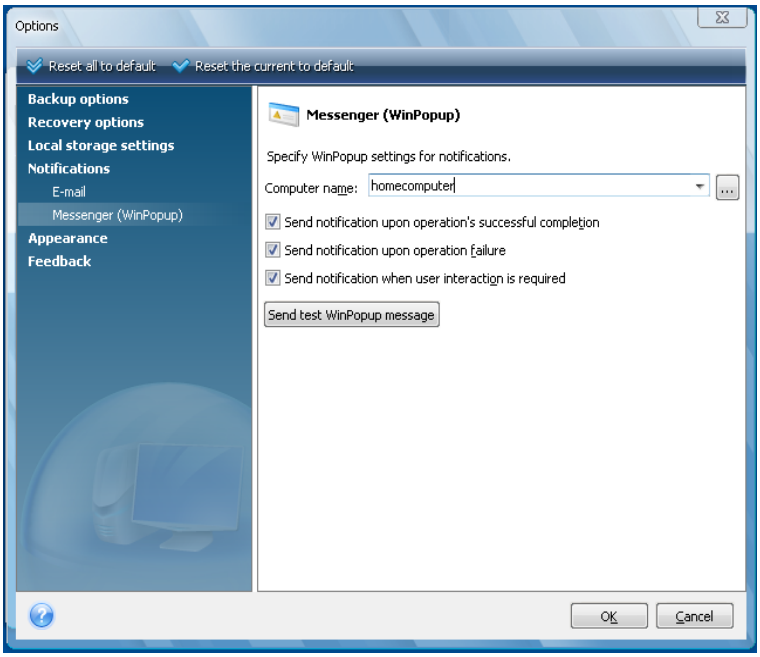
- if the operation failed (check **Add full log to the notification** to add the full operation log to the message)
- during the operation when user interaction is required

After setting up e-mail notifications, you can send a test mail message by clicking the appropriate button.

19.2.2. WinPopup notification

To set up WinPopup notification, select **Tools & Utilities** → **Options** → **Notifications** → **Messenger (WinPopup)**:



Provide the name of the computer to which notifications will be sent.

At the bottom of this window you can choose whether you want to get notifications:

- when the operation is completed successfully
- when the operation failed
- during the operation when user interaction is required

19.3. Viewing Tasks and Logs

Acronis True Image Home has a Tasks and Log screen that allows you to view its working logs and scheduled tasks. The logs can provide information, for instance, about scheduled backup or validation task results, including reasons for any failures.

Most Acronis True Image Home operations write their own entries in the logs, though logs are not provided for the Try&Decide operation, image mounting/unmounting, Acronis Startup Recovery Manager activation/deactivation, and bootable media creation.

The logs contain only partial information on operation of Acronis Online Backup and Acronis Nonstop Backup. The remaining information on operation of those features is written to their own log. That

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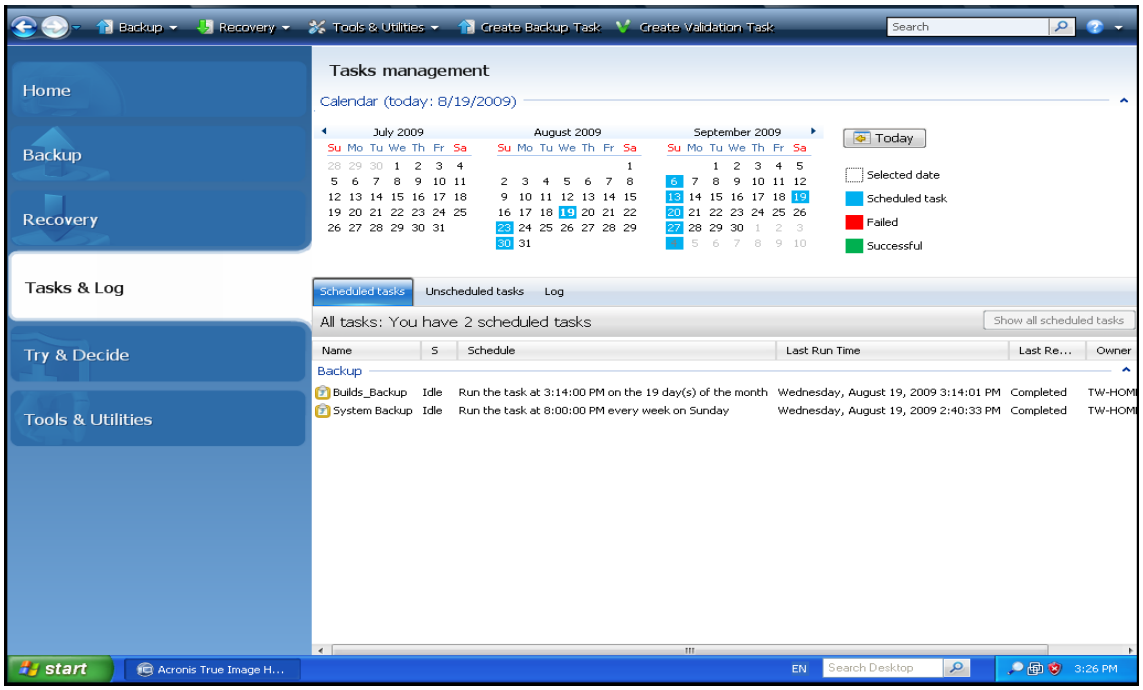
log is not available to users as it is intended for Acronis Support personnel to help in troubleshooting the issues users have with those features. It is included in Acronis System Report.

To open the **Tasks & Log** screen, click **Tasks & Log** on the sidebar. By default, the screen opens with the **Scheduled Tasks** tab selected. The tab shows all scheduled tasks (if any). Selecting the **Unscheduled Tasks** tab will show all tasks that have been configured after choosing **Do not schedule** at the Scheduling step in the Backup or Validation wizard, regardless of whether they have been completed or not.



The color marks in the calendar show information about the days with scheduled tasks, tasks completed with errors, and successfully completed tasks. The current day is highlighted in bold font. Clicking a day marked with a scheduled task shows the task(s) scheduled for this date.

The buttons with left and right arrows at the sides of the calendar allow you to browse the months being shown in the calendar. If you have gone several months back or forward, clicking the **Today** button will quickly return you to the current month and date.

Clicking any day in the past takes you to the **Log** tab and shows logs for the selected date. If there are no logs for that date, an appropriate message appears.

To view logs, you can just click on the **Log** tab.

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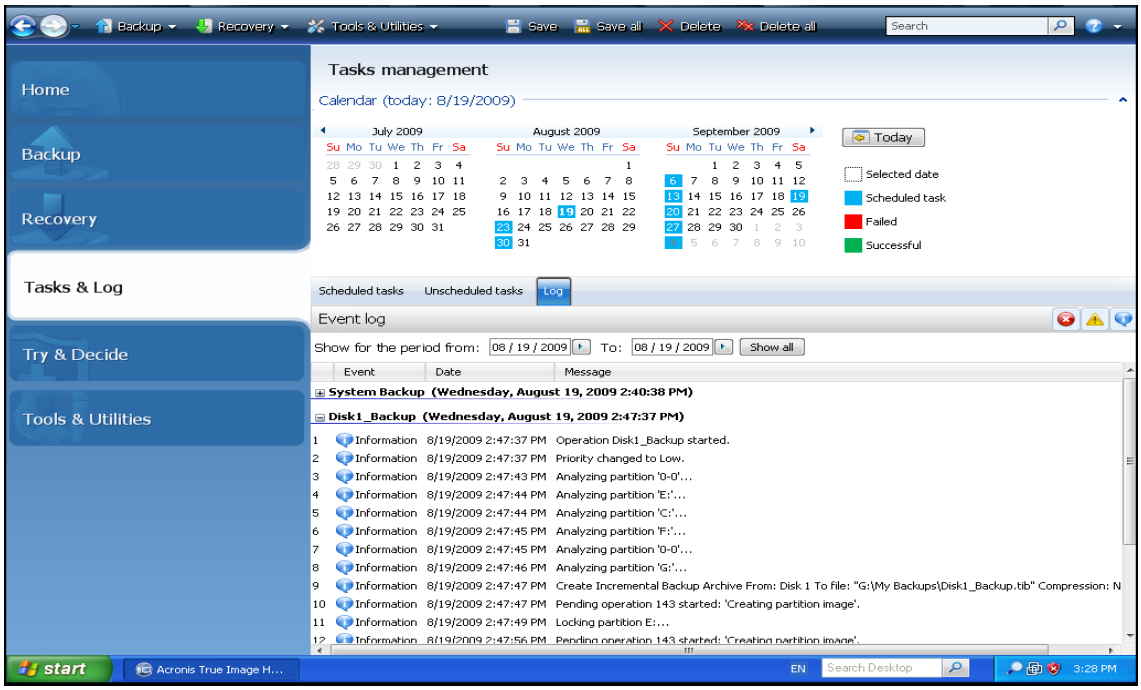
When the **Log** tab is selected, the upper pane shows the calendar, while the lower one shows logs' contents.



To view the logs for a specific period, select the period by clicking the right arrow buttons in the **From:** and **To:** fields of the **Show for the period** area. Clicking the arrow in the **From:** field opens a pop-up calendar where you can set the start day of the period by double-clicking the appropriate day. Then set the end day using the same procedure for the **To:** field. You can change months and years in the pop-up calendars using the left and right arrows in the month name area. In addition, you can enter the desired period start and end dates directly in the fields. If you would like to see all the logs, click the **Show all** button.

To delete a log entry, select it and click the **Delete** button on the toolbar. To delete all log entries, click the **Delete all** button. You can also save a log entry to file by clicking the **Save** button. To save all logs to file, click **Save all**.

If any step shown in the logs was terminated by an error, the corresponding log will be marked with a red circle with a white cross inside.

The three buttons to the right control message filters: the white cross in the red circle filters error messages, the exclamation mark in a yellow triangle filters warnings, and the "i" in the blue circle filters information messages.

To better view the details of the current step, you can hide the calendar by clicking the **Up** arrow at the top right of the calendar pane. This will enlarge the logs area. To view the calendar again, click the **Down** arrow at the top right of the calendar pane.

Clicking a day marked with a scheduled task takes you to the **Scheduled tasks** tab with the task details shown. Clicking any day in the future also takes you to the **Scheduled tasks** tab. To view all scheduled tasks created so far, click the **Show all scheduled tasks** button.

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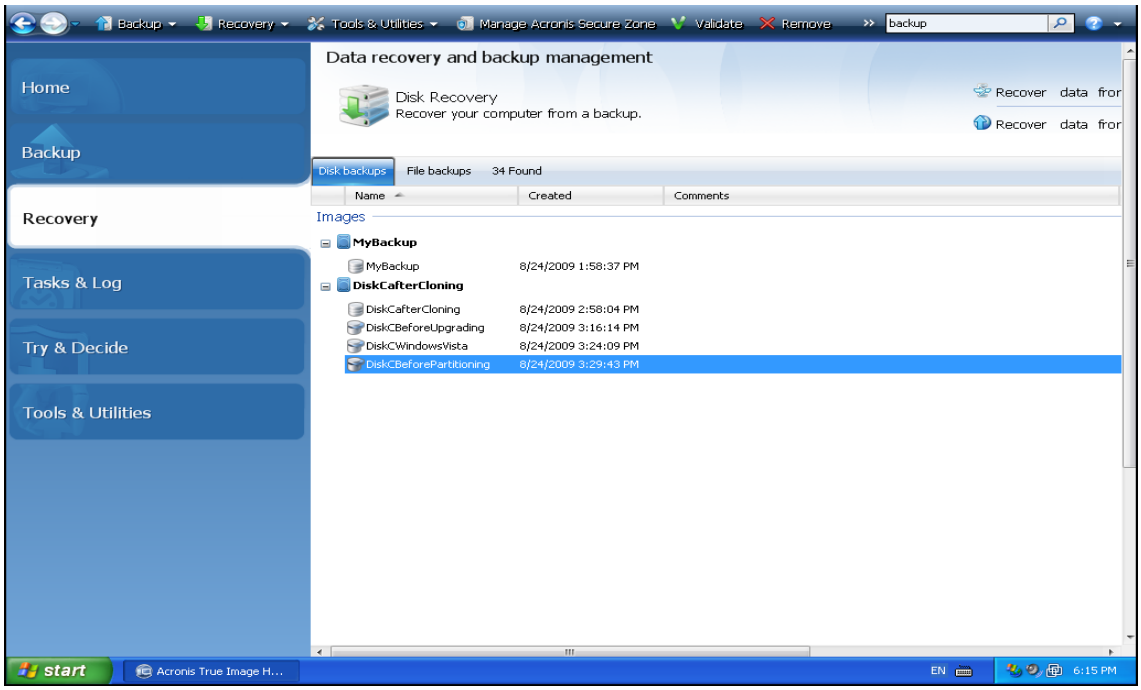
19.4. Managing backup archives

After a while you may wish (or be forced) to manage your backup archives, for example, in order to free up some space for new backups by removing the oldest backups or those you no longer need. As now Acronis True Image Home stores information about the backup archives in a metadata information database, you must manage backup archives (e.g. delete or move some of them) by using the program's tools and not Windows Explorer. To manage your backup archives, go to the **Data recovery and backup management** screen by selecting **Recovery** on the sidebar.

All backup archives are distributed between two tabs: **Disk backups** and **File backups**. The Disk backups tab lists the image backups and the File backups - the My Data, System State, My E-mail, and Application Settings backups.



The shortcut menu opened by right-clicking on a desired backup archive provides the following operations with backups:

- **Explore** - see Exploring archives and mounting images (p. 139)
- **Recover** - see Recovery Wizard - detailed information (p. 95)
- **Update** - adding an incremental or differential backup to an existing backup archive without creating a new backup task
- **Validate Archive** - see Validating backup archives (p. 153)
- **Mount Image** (only for images) - see Mounting an image (p. 142)
- **Consolidate** - see Consolidating backups (p. 160)
- **Edit Comments** - editing comments made during backup creation or adding comments for a scheduled backup that ran unattended
- **Rename** - renaming backup archives or individual backups (a backup is renamed only in the program's metadata database, however, the backup filename remains unchanged)
- **Move** - see Moving backup archives (p. 163)
- **Remove** - see Removing backup archives (p. 163)

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- **Convert to Windows backup** - see Converting to Windows backup (p. 134) (this item appears only if an image backup in the tib format is selected)
- **Convert to Acronis backup** - see Converting to Acronis backup (p. 135) (this item appears only if an image backup in the vhd format is selected)
- **Details** - viewing detailed information on the selected backup

19.5. Consolidating backups

There are two kinds of backup consolidation procedures in Acronis True Image Home: automatic consolidation and file name-based consolidation. In the case of automatic consolidation, the program uses the rules set for backup archives. After creating a backup, the program checks the backup archive for quota violations, such as exceeding a preset maximum number of gigabytes set aside for backups and, if any limitation is exceeded, consolidates the oldest backups. It will combine the first full backup with the next incremental one into one full backup which will be dated the latter backup date. Then, if necessary, this backup will be combined with the next, until the occupied storage space (or number of backups) decreases to the preset limit. Thus, the archive integrity will not be affected, despite the fact that the oldest backups will be deleted.

*The actual number of backups created can exceed the **Maximum number of backups** by one. This enables the program to detect that the number quota was exceeded and start consolidation. Backup will be prohibited until the consolidation finishes.*

The file name-based consolidation allows deleting the backups that you do not need anymore from any archive while maintaining the archive consistency. If required, you can delete from an archive the base full backup. The program will create another full backup in place of the oldest remaining backup. The two kinds of backup procedures have the following difference:

Automatic consolidation only can consolidate two backups in one. File name-based consolidation keeps whichever backups you choose and deletes any backups that are not selected.

The current Acronis True Image Home version does not support consolidation of backup archives created in the zip format.

Acronis True Image Home cannot consolidate incremental backups created when "editing" partition images mounted in the Read/Write mode.

To consolidate backups in an archive:

1. Select the archive for consolidation after choosing **Recovery** on the sidebar.
2. Start the **Consolidation Wizard** by right-clicking on the selected backup archive and choose **Consolidate** in the shortcut menu.

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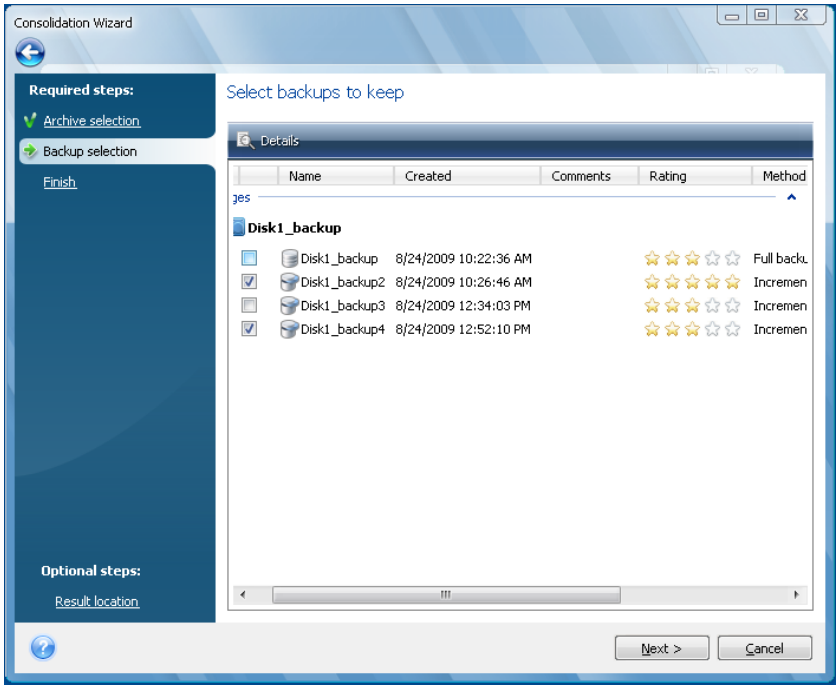
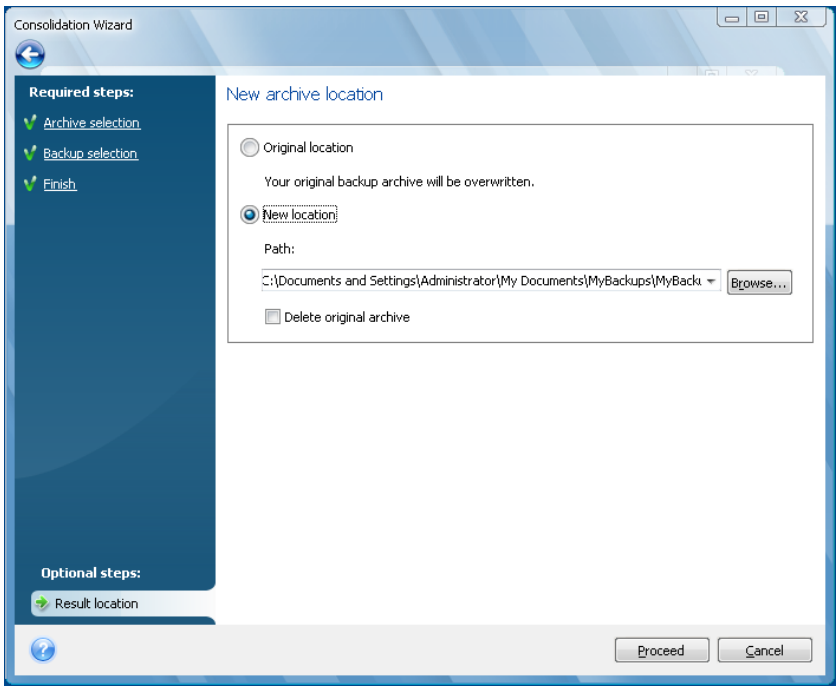
3. The program displays a list of backups belonging to the selected archive with their creation date and time. The top backup is the full backup; the rest are incremental backups. Select the backups you want to *keep* and click **Next**.



4. By default, the program selects the same location for the consolidated archive and the original backup archive will be overwritten. But you can choose a new location and in such case the source archive will stay as is, unless you choose to delete it by selecting the **Delete original archive** box. This requires more disk space, but ensures the security of the archive in case the consolidation fails because of power failure or a lack of disk space. To choose a new location, click **Options** on the Summary screen.

You cannot choose another location when consolidating backups in an archive located in Acronis Secure Zone.



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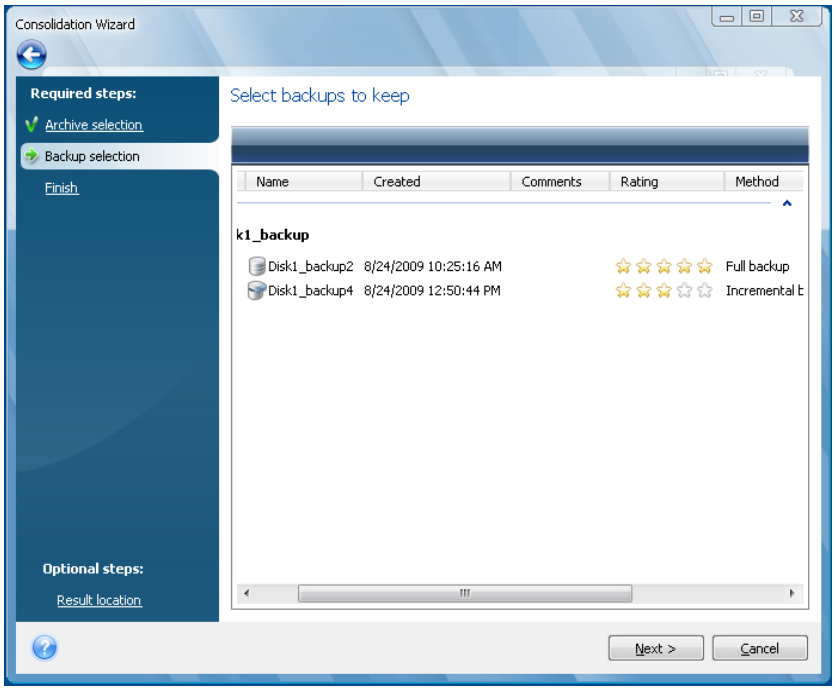
5. After choosing the new location click **Proceed** to start consolidation.

   In our example, when consolidation is complete, disk G will contain two new archives Disk1_backup2 and Disk1_backup4.

   Disk1_backup2 is a full backup and Disk1_backup4 is an incremental backup. You can make sure of this by starting the consolidation wizard again, selecting the archive Disk1_backup and proceeding to the next window.



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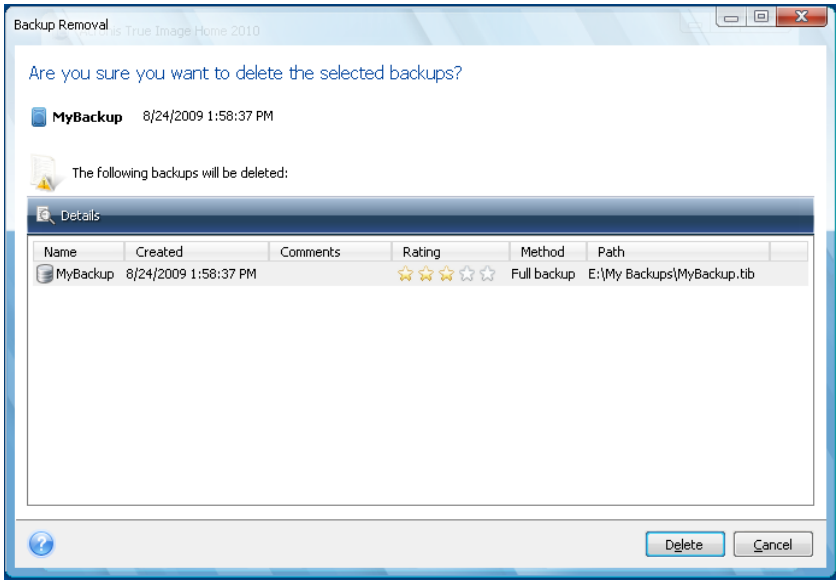
19.6. Removing backup archives

You may want to remove backups and backup archives you no longer need. Because Acronis True Image Home stores information on the backup archives in a metadata information database, deleting unneeded archive files using Windows Explorer will not delete information about these archives from the database and Acronis True Image Home will consider that they still exist. This will result in errors when the program tries to perform operations on the backups that no longer exist. So you must only remove obsolete backups and backup archives using the tool provided by Acronis True Image Home. To remove the entire backup archive, select it and click **Remove** on the toolbar or right-click on the full backup of the backup archive and choose **Remove** in the shortcut menu. To remove an incremental or a differential backup, select it and click **Remove** on the toolbar or right-click on the selected backup and choose **Remove** in the shortcut menu. In this case all other successive incremental and differential backups created later than the selected incremental or differential backup will also be deleted. The following screen appears:



If you click **Delete**, the program will remove the backup archive from its metadata information database as well as from the hard disk.

19.7. Moving backup archives

Now Acronis True Image Home allows you to move backup archives to another location. This may come in handy if you want to free space for a new backup, but want to keep an earlier backup archive at another location, for example, a network share. Another possible scenario - you want to recover a disk used for keeping your backup archives. As the program cannot recover if the backup archive is on the same hard disk you are going to recover, you need to move the backup archive to another hard disk.

1. Select the archive for moving after clicking **Recovery** on the sidebar.
2. To move the archive, select it on the **Data recovery and backup management** screen. If the archive consists of several backups, you can select any of them because Acronis True Image Home always moves the entire archive.
3. After making your selection, right-click and choose **Move** in the shortcut menu.

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4. When moving is complete, the path to the archive will change in the **Path** column of the Data recovery and backup management screen.

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20. Transferring the system to a new disk

20.1. General information

Sooner or later, most computer users find that their hard disk is too small. If you just don't have space for more data, you can add another disk just for data storage as described in the following chapter.

However, you might find that your hard disk does not have enough space for the operating system and installed applications, preventing you from updating your software or installing new applications. In this case, you have to transfer the system to a higher-capacity hard disk.

To transfer the system, you must first install the disk in the computer (see details in Hard disks and boot sequence (p. 192)). If your computer doesn't have a bay for another hard disk, you can temporarily install it in place of your CD drive or use a USB 2.0 connection to the external target disk. If that is not possible, you can clone a hard disk by creating a disk image and recovering it to a new hard disk with larger partitions.

There are two transfer modes available: automatic and manual.

In the automatic mode, you will only have to take a few simple steps to transfer all the data, including partitions, folders and files, to a new disk, making it bootable if the original disk was bootable.

There will be only one difference between these disks – partitions on the newer disk will be larger. Everything else, including the installed operating systems, data, disk labels, settings, software and everything else on the disk, will remain the same.

This is the only result available in the automatic mode. The program can only duplicate the original disk layout to the new one. To obtain a different result, you will have to answer additional questions about cloning parameters.

The manual mode will provide more data transfer flexibility. You will be able to select the method of partition and data transfer:

- as is
- new disk space is proportionally distributed between the old disk partitions
- new disk space is distributed manually

On program screens, damaged partitions are marked with a red circle and a white cross inside in the upper left corner. Before you start cloning, you should check such disks for errors and correct the errors using the appropriate operating system tools.

The current Acronis True Image Home version does not support cloning of dynamic and GPT disks.

20.2. Security

Please note the following: if the power goes off or you accidentally press **RESET** during the transfer, the procedure will be incomplete and you will have to partition and format or clone the hard disk again.

No data will be lost because the original disk is only being read (no partitions are changed or resized).

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Nevertheless, we do not recommend that you delete data from the old disk until you are sure it is correctly transferred to the new disk, the computer boots up from it and all applications work.

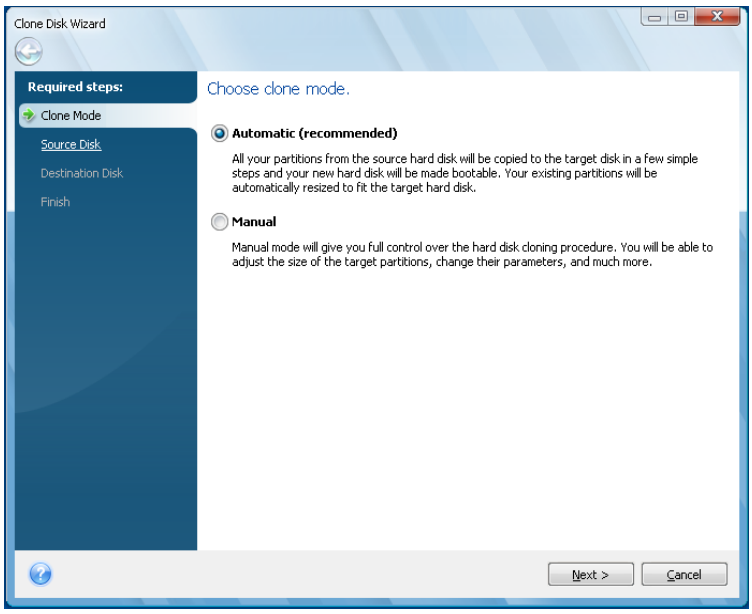
20.3. Executing transfers

For best results, install the target (new) drive where you plan to use it and the source drive in another location, e.g. in an external USB enclosure. This recommendation is especially important for laptops.

To start cloning, select **Tools & Utilities** → **Clone disk** in the main program menu.

20.3.1. Selecting Clone mode

You will see the **Clone Mode** window.


Clone Disk Wizard
Required steps:
Clone Mode
Source Disk
Destination Disk
Finish
Choose clone mode.
Automatic (recommended)
All your partitions from the source hard disk will be copied to the target disk in a few simple steps and your new hard disk will be made bootable. Your existing partitions will be automatically resized to fit the target hard disk.
Manual
Manual mode will give you full control over the hard disk cloning procedure. You will be able to adjust the size of the target partitions, change their parameters, and much more.
Next >
Cancel

We recommend using automatic mode in most cases. The manual mode can be useful if you need to change the disk partition layout.

If the program finds two disks, one partitioned and another unpartitioned, it will automatically recognize the partitioned disk as the source disk and the unpartitioned disk as the destination disk. In such case, the next steps will be bypassed and you will be taken to the cloning Summary screen.

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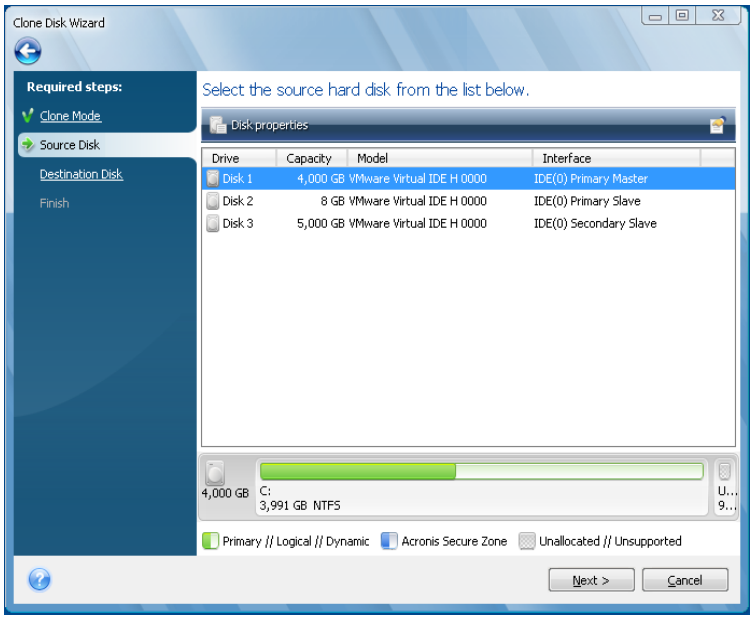
20.3.2. Selecting source disk

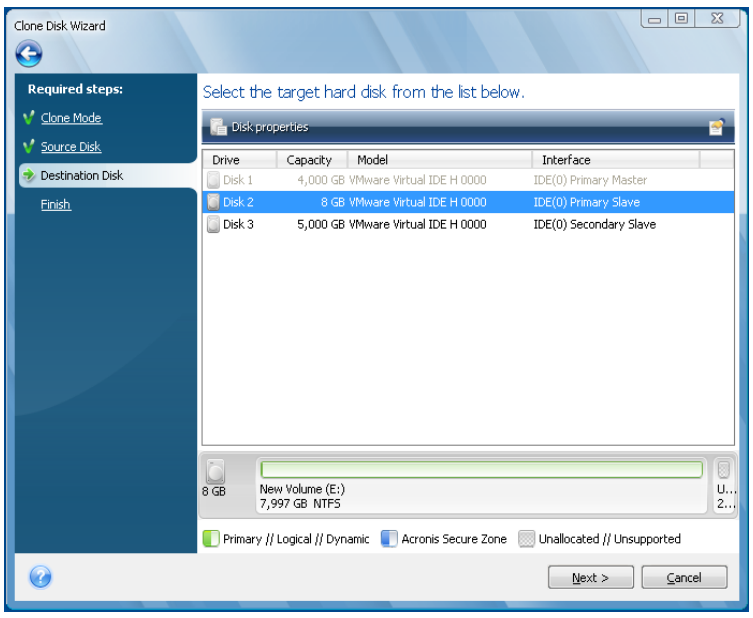
If the program finds several partitioned disks, it will ask you which one is the source (i.e. the older data disk).



You can determine the source and destination using the information provided in this window (disk number, capacity, label, partition, and file system information).

20.3.3. Selecting destination disk

After you select the source disk, you have to select the destination where the disk information will be copied.



The previously selected source becomes grayed-out and disabled for selection.

If any disk is unpartitioned, the program will automatically recognize it as the destination and bypass this step.

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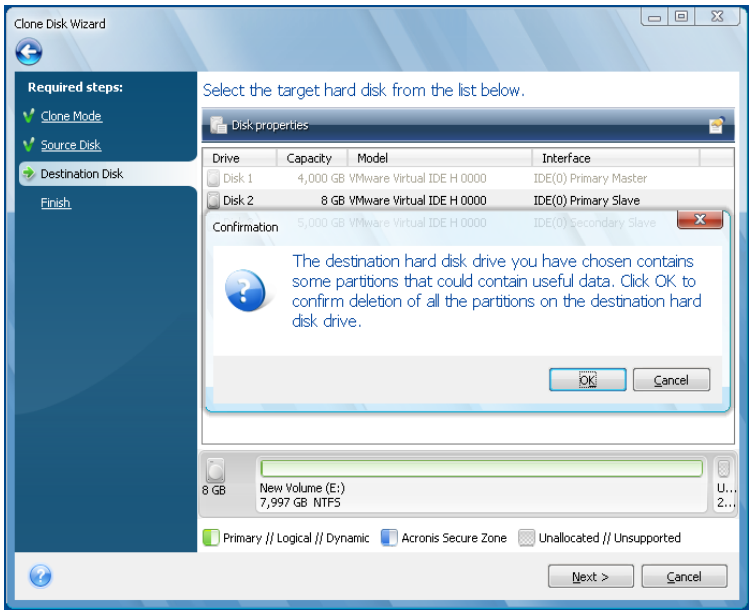
20.3.4. Partitioned destination disk

At this point, the program checks to see if the destination disk is free. If not, you will be prompted by the Conformation window stating that the destination disk contains partitions, perhaps with useful data.



To confirm deletion of the partitions, click **OK**.

*Note that no real changes or data destruction will be performed at this time! For now, the program will just map out cloning. All changes will be implemented only when you click **Proceed.***

If you selected the automatic mode, the program will not ask you anything else and will take you to the cloning summary window.

20.3.5. Selecting partition transfer method

When you select the manual cloning mode, Acronis True Image Home will offer you the following data move methods:

- **As is**
- **Proportional** – the new disk space will be proportionally distributed among cloned partitions

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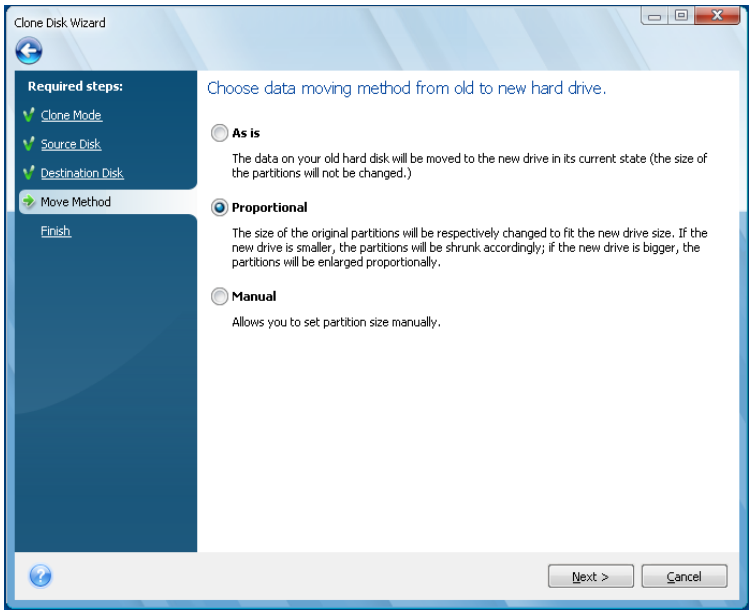
- **Manual** – you will specify the new size and other parameters yourself


Clone Disk Wizard
Required steps:
Clone Mode
Source Disk
Destination Disk
Move Method
Finish
Choose data moving method from old to new hard drive.
As is
The data on your old hard disk will be moved to the new drive in its current state (the size of the partitions will not be changed.)
Proportional
The size of the original partitions will be respectively changed to fit the new drive size. If the new drive is smaller, the partitions will be shrunk accordingly; if the new drive is bigger, the partitions will be enlarged proportionally.
Manual
Allows you to set partition size manually.
Next >
Cancel

If you elect to transfer information "as is," a new partition will be created for every old one with the same size and type, file system and label. The unused space will become unallocated. Afterwards, you will be able to use the unallocated space to create new partitions or to enlarge the existing partitions with special tools, such as Acronis Disk Director Suite.

As a rule, "as is" transfers are not recommended as they leave a lot of unallocated space on the new disk. Using the "as is" method, Acronis True Image Home transfers unsupported and damaged file systems.

If you transfer data proportionally, each partition will be enlarged, according to the proportion of the old and new disk capacities.

FAT16 partitions are enlarged less than others, as they have a 4GB size limit.

Depending on the selected combination, you will proceed to either the cloning summary window, or the Change disk layout step (see below).

20.3.6. Cloning with manual partitioning

The manual transfer method enables you to resize partitions on the new disk. By default, the program resizes them proportionally. In the next window, you will see the new disk layout.

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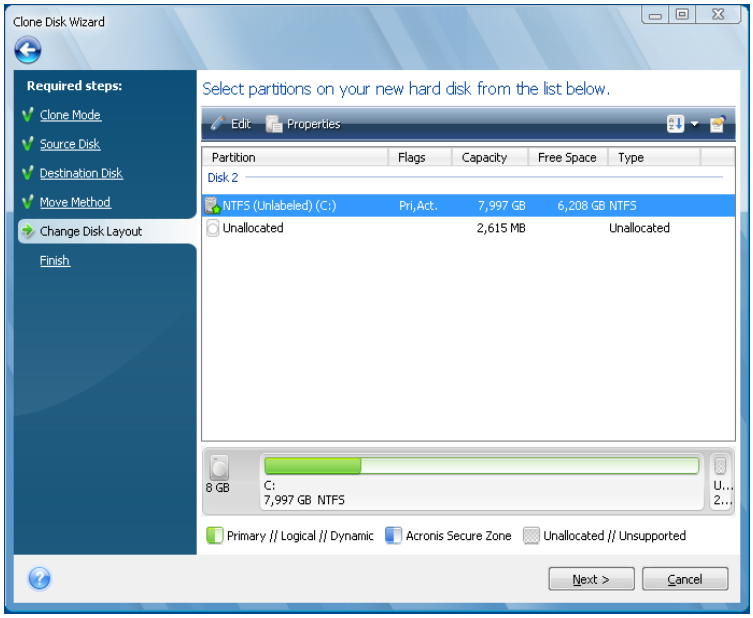
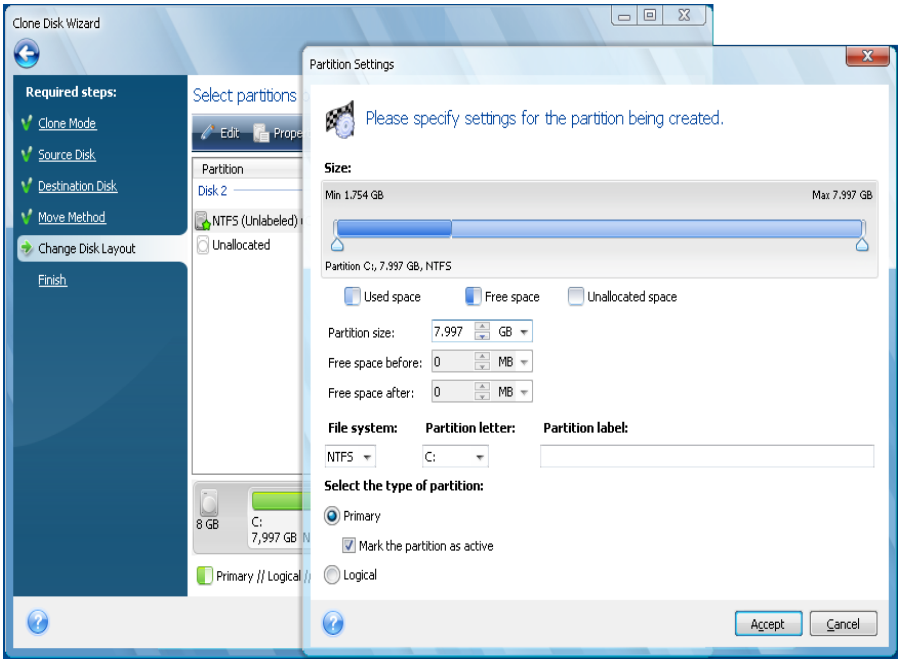
Along with the hard disk number, you will see disk capacity, label, partition, and file system information. Different partition types, including primary, logical, and unallocated space are marked with different colors.



First, select a partition to resize and click **Edit** on the toolbar. This will open the Partition Settings window, where you can resize and relocate the partition.



You can do this by entering values in the **Free space before, Partition size, Free space after** fields, by dragging partition borders or the partition itself.

If the cursor turns into two vertical lines with left and right arrows, it is pointed at the partition border and you can drag it to enlarge or reduce the partition's size. If the cursor turns into four arrows, it is pointed at the partition, so you can move it to the left or right (if there's unallocated space near it).

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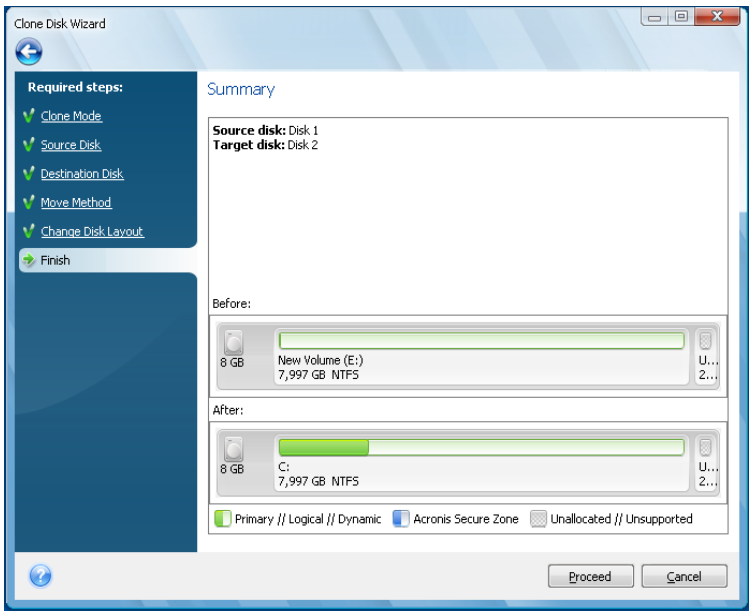
Having provided the new location and size, click **Accept**. You will be taken back to the Change disk layout window. You might have to perform some more resizing and relocation before you get the layout you need.

20.3.7. Cloning summary

The cloning summary window graphically (as rectangles) illustrates information about the source disk (partitions and unallocated space) and the destination disk layout. Along with the disk number, some additional information is provided: disk capacity, label, partition and file system information. Partition types — primary, logical and unallocated space — are marked with different colors.



Cloning a disk containing the currently active operating system will require a reboot. In that case, after clicking **Proceed** you will be asked to confirm the reboot. Canceling the reboot will cancel the entire procedure. After the clone process finishes you will be offered an option to shut down the computer by pressing any key. This enables you to change the position of master/slave jumpers and remove one of the hard drives.

Cloning a non-system disk or a disk containing an operating system, but one that is not currently active, will proceed without the need to reboot. After you click **Proceed**, Acronis True Image Home will start cloning the old disk to the new disk, indicating the progress in a special window. You can stop this procedure by clicking **Cancel**. In that case, you will have to repartition and format the new disk or repeat the cloning procedure. After the cloning operation is complete, you will see the results message.

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21. Adding a new hard disk

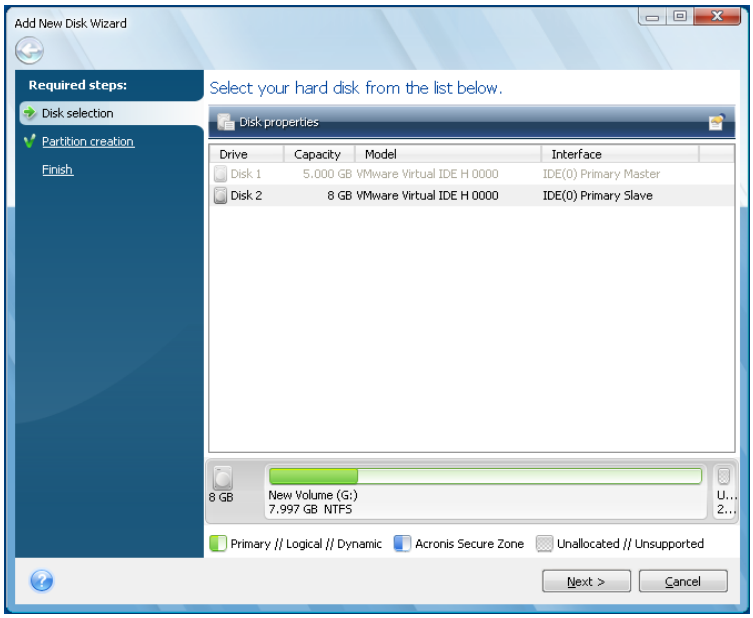
If you don't have enough space for your data, you can either replace the old disk with a new higher-capacity one (data transfers to new disks are described in the previous chapter), or add a new disk only to store data, leaving the system on the old disk. If the computer has a bay for another disk, it would be easier to add a data disk drive than to clone a system drive.

To add a new disk, you must first install it in your computer.

21.1. Selecting a hard disk

To start the Add New Disk Wizard, select **Tools & Utilities** → **Add New Disk** in the main program menu.

Select the disk that you've added to the computer.



If there are any partitions on the new disk, you will be shown a warning window. For you to be able to add the disk, they must be deleted first, so click **OK** to continue.

21.2. Creating new partitions

Next you will see the current partition layout. Initially, all disk space will be unallocated. This will change after you add new partitions.

To create a partition, click **Create new partition** on the toolbar and set the new partition location and size. You can do this both by entering values in the **Free space before, Partition size, Free space after** fields, and by dragging partition borders or the partition itself.

If the cursor turns into two vertical lines with left and right arrows, it is pointed at the partition border and you can drag it to enlarge or reduce the partition size. If the cursor turns into four arrows, it is pointed at the partition, so you can move it to the left or right (if there is unallocated space near it).

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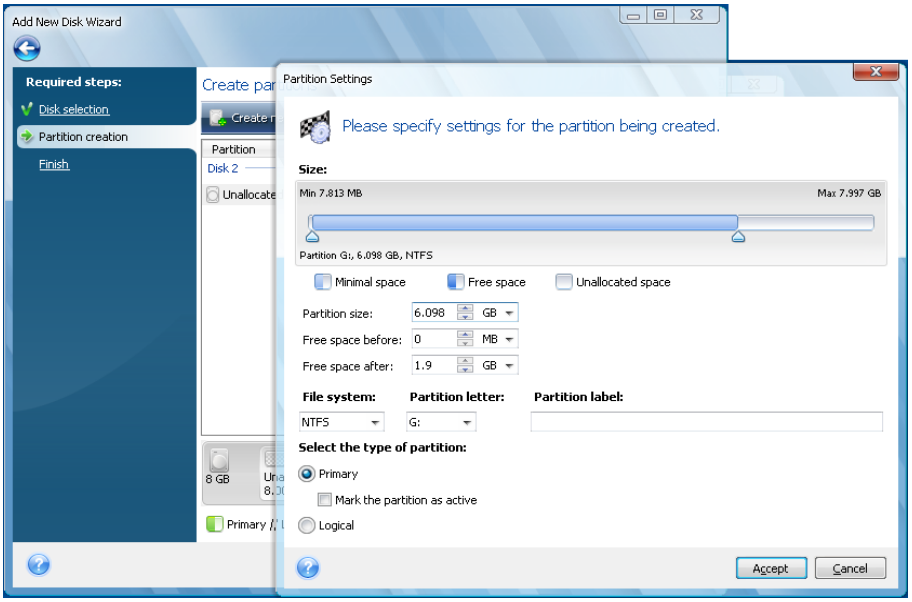
Select a file system for the new partition. You may select a partition letter of your choice (or leave the default one) and input a label for the new partition in the corresponding field. Finally, select a partition type.

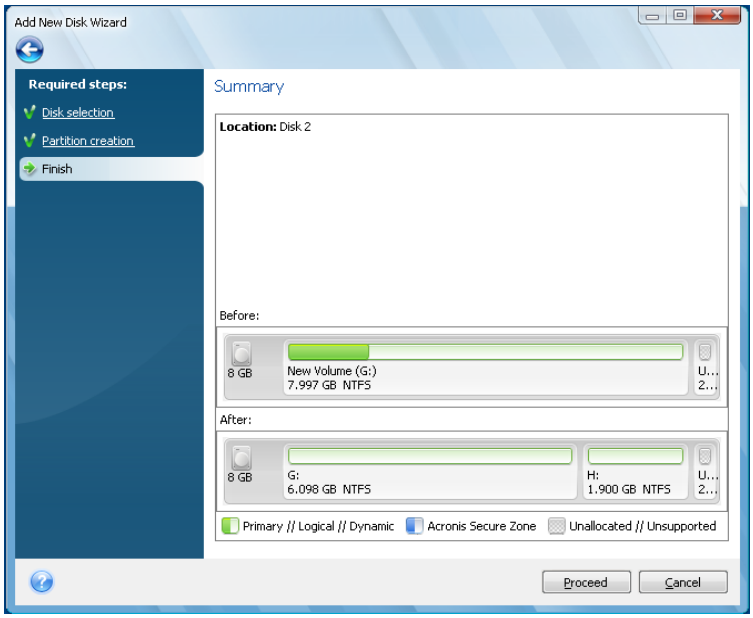


Click the **Accept** button and you will be taken back to the Partition Creation screen. Check the resulting partition's settings and start creating another partition by clicking **Create new partition** again. You can also edit the new partition's settings by clicking **Edit** on the toolbar or delete it by clicking **Delete**.

*If you allocate all unallocated space on the disk to the new partition, the **Create new partition** button disappears.*

21.3. Disk add summary

Clicking **Next** after creating a desired partition layout takes you to the disk add summary. The disk add summary contains a list of operations to be performed on disks.



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After you click **Proceed**, Acronis True Image Home will start creating new partition(s), indicating the progress in a special window. You can stop this procedure by clicking **Cancel**. You will then have to repartition and format the new disk or repeat the disk add procedure.

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22. Security and Privacy Tools

Acronis True Image Home includes tools for secure destruction of data on an entire hard disk drive, individual partitions, as well as for erasing individual files and eliminating user system activity traces.

These tools ensure the security of your confidential information, as well as maintain your privacy when you work with a PC, because they clean-up the evidence showing your actions (records in various system files) that you don't even know about. This could include usernames and passwords.

If you need to:

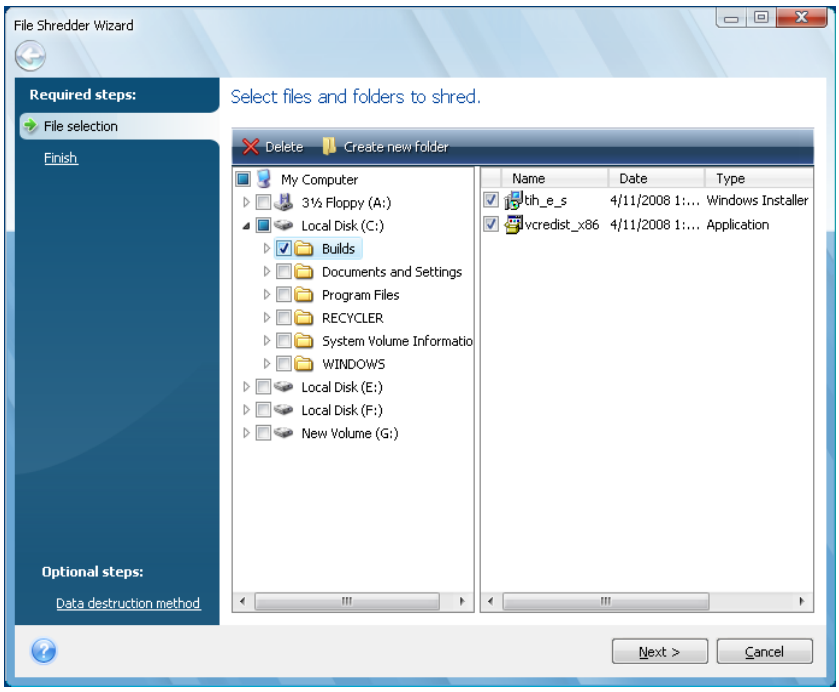
- securely destroy **files or folders** you select, run **File Shredder.**
- **securely destroy data** on selected partitions and/or disks so it can't be recovered, run **Acronis DriveCleanser**.
- clean up Windows components (folders, files, registry sections, etc.) related to general system tasks which are capable of retaining user PC activity evidence, run **System Clean-up**.

22.1. Using File Shredder

The **File Shredder** enables quick, permanent destruction of selected of files and folders.

To destroy permanently certain files/folders, select **Tools & Utilities** → **File Shredder** in the main program menu. This starts **File Shredder Wizard,** which will guide you through the steps required for permanently destroying the selected files and folders.

1. First select the files and/or folders you wish to destroy.



2. To **destroy permanently** the selected files using the default data destruction method (Fast), select the **Destroy the selected files and folders irreversibly** check box in the next window and click **Proceed**, otherwise click **Options** to select the desired data destruction method.

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3. By default the program will use the Fast method (see Hard Disk Wiping Methods (p. 196)). You can also choose one of the other preset data destruction methods from the drop-down list. Clicking **Proceed** after you select the desired method will start the task execution (if the **Proceed** button is unselectable, click **Finish** on the sidebar and select the **Destroy the selected files and folders irreversibly** box to enable the **Proceed** button).

22.2. Acronis DriveCleanser

Many operating systems do not provide users with secure data destruction tools, so deleted files can be recovered easily by using simple applications. Even a complete disk reformat cannot guarantee you permanent confidential data destruction.

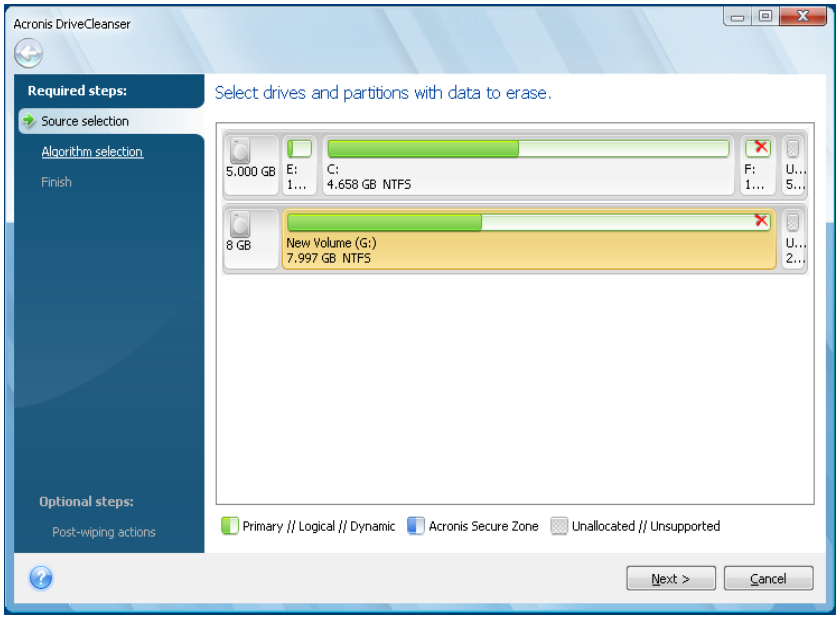
Acronis DriveCleanser solves this problem with guaranteed and permanent data destruction on selected hard disks and/or partitions. It allows you to select from a number of data destruction methods depending on the importance of your confidential information.

To start Acronis DriveCleanser, select **Tools & Utilities** → **Acronis DriveCleanser** in the main program menu. Acronis DriveCleanser allows you to do the following:

- clean up selected hard disks or partitions using preset methods;
- create and execute custom user methods of hard disk clean-up.

Acronis DriveCleanser is based on a **wizard** that **scripts** all hard disk operations, so no data destruction is performed until you click **Proceed** in the wizard's Summary window. At any moment, you can return to the previous steps to select other disks, partitions or data destruction methods.

First, you must select the hard disk partitions where you want to destroy data.



To select a partition, click the corresponding rectangle. You will see a red mark in the upper right corner indicating that the partition is selected.

You can select an entire hard disk or several disks for data destruction. To do this, click the rectangle corresponding to the hard disk (with a device icon, disk number and capacity).

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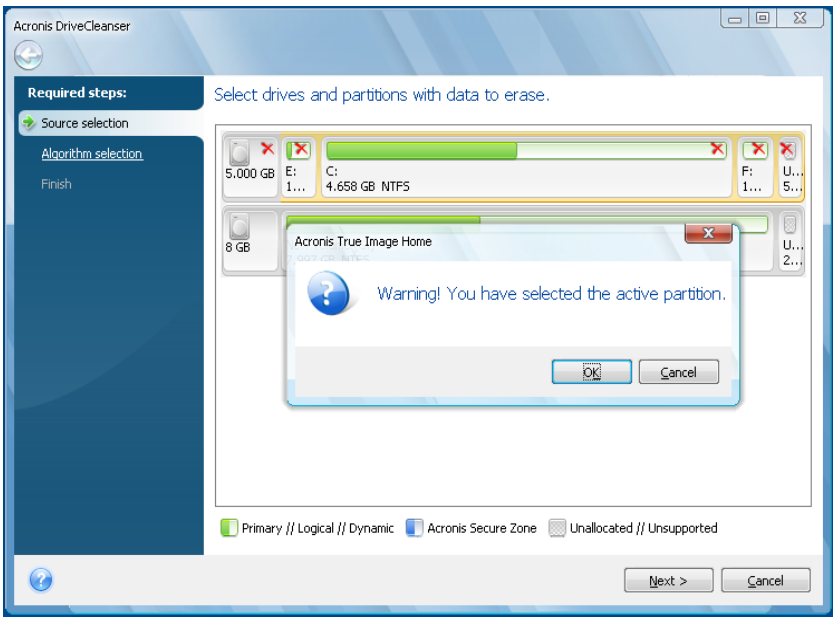
You can simultaneously select several partitions located on different hard disk drives or on several disks, as well as unallocated space on disks.

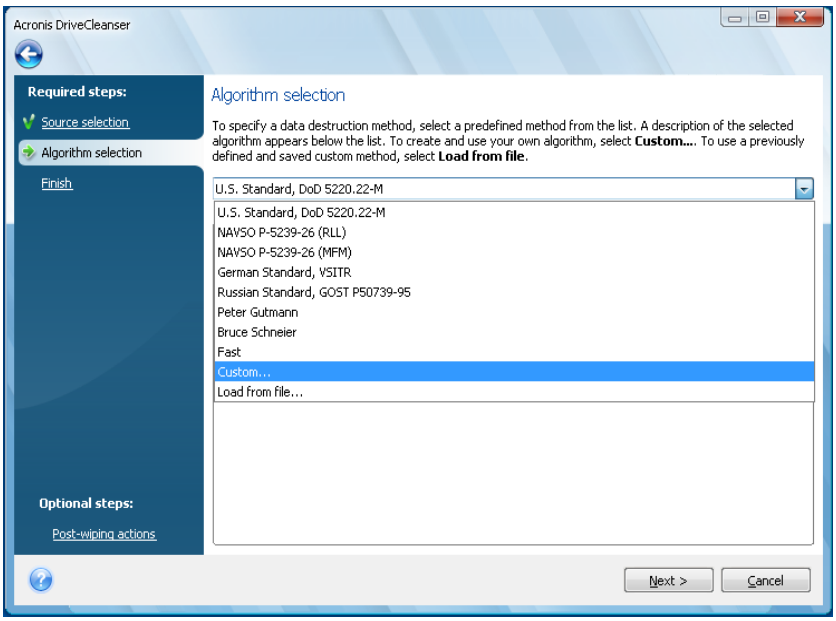
Click **Next** to continue.

If the disks and/or partitions you have selected include the system disk or partition, you will see a warning window.



Be careful, because clicking **OK** in this warning window and then **Proceed** in the Summary window will result in wiping the system partition containing your Windows operating system.

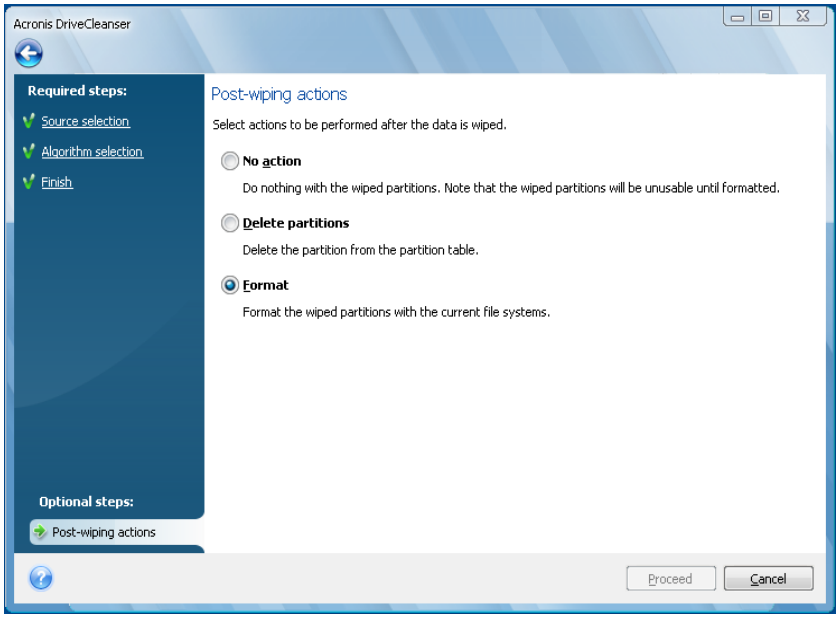
Acronis DriveCleanser utilizes a number of the most popular data destruction methods described in detail in Hard Disk Wiping Methods (p. 196) of this manual. If you want to create a custom data destruction algorithm, choose **Custom...** and go to Creating custom algorithms of data destruction (p. 179).


Acronis DriveCleanser
Required steps:
Source selection
Algorithm selection
Finish
Optional steps:
Post-wiping actions
Algorithm selection
To specify a data destruction method, select a predefined method from the list. A description of the selected algorithm appears below the list. To create and use your own algorithm, select Custom.... To use a previously defined and saved custom method, select Load from file.
U.S. Standard, DoD 5220.22-M
U.S. Standard, DoD 5220.22-M
NAVSO P-5239-26 (RLL)
NAVSO P-5239-26 (MFM)
German Standard, VSITR
Russian Standard, GOST P50739-95
Peter Gutmann
Bruce Schneier
Fast
Custom...
Load from file...
Next >
Cancel

After selecting or creating the disk wiping method click **Next** to continue. Acronis DriveCleanser will display the data destruction task summary. You can click **Proceed** after selecting the **Wipe the selected partitions irreversibly** box or click **Options** to select the post-wiping action on the partitions selected for data destruction, if the default action, namely, **Format** does not suit you.

In the **Post-wiping actions** window Acronis DriveCleanser offers you three choices:

- **No action** — just destroy data using the method selected below
- **Delete partitions** — destroy data and delete partition(s)
- **Format** — destroy data and format partition (default)



In this example, the switch is set to **Format**. This will allow you to see the results of partition and data destruction, along with the reformatting of the partition.

You cannot delete partitions on dynamic and GPT disks.

Up to this point, you can make changes in the created task. Clicking **Proceed** after you select a post-wiping action will launch the task execution (if the **Proceed** button is unselectable, click **Finish** on the sidebar and select the **Wipe the selected partitions irreversibly** box to enable the **Proceed** button). Acronis DriveCleanser will perform all actions necessary for destroying the contents of the selected partition or disk. After this is done, you will see a message indicating the successful data destruction.

Acronis DriveCleanser offers you another useful capability — to estimate the results of executing a data destruction method on a hard disk or partition. To view the state of your cleaned disks or partitions, choose **Tools & Utilities** on the sidebar. The Acronis DriveCleanser area in the right pane contains the **View the current state of your hard drives** link. Click on the link and then choose the partition whose cleaning results you wish to view. This opens an integrated Acronis Disk Editor (in read-only mode).

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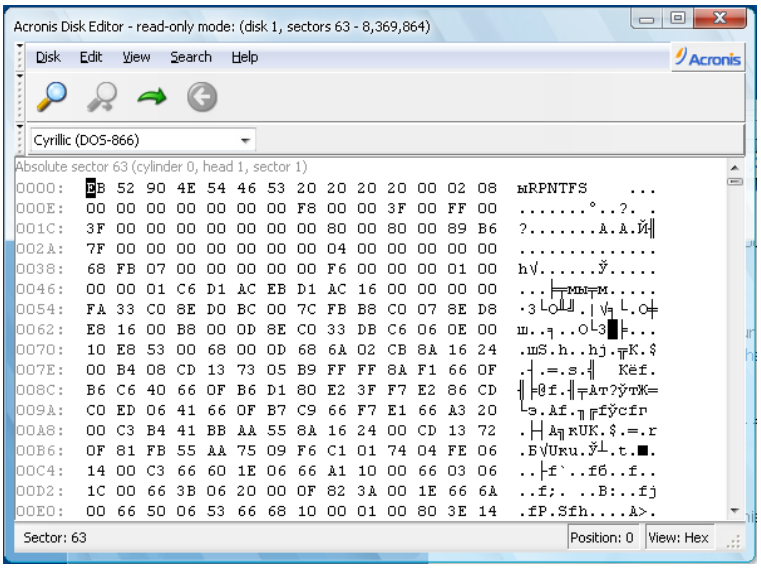
The aforementioned algorithms offer various levels of confidential data destruction. Thus the picture you might see on a disk or partition depends on the data destruction method. But what you actually see are disk sectors filled with either zeros or random symbols.



22.3. Creating custom algorithms of data destruction

Acronis DriveCleanser gives you the opportunity to create your own algorithms for wiping hard disks. Although the software includes several levels of data destruction, you can choose to create your own. This is recommended only for users familiar with the principles of data destruction used in secure disk wiping methods.

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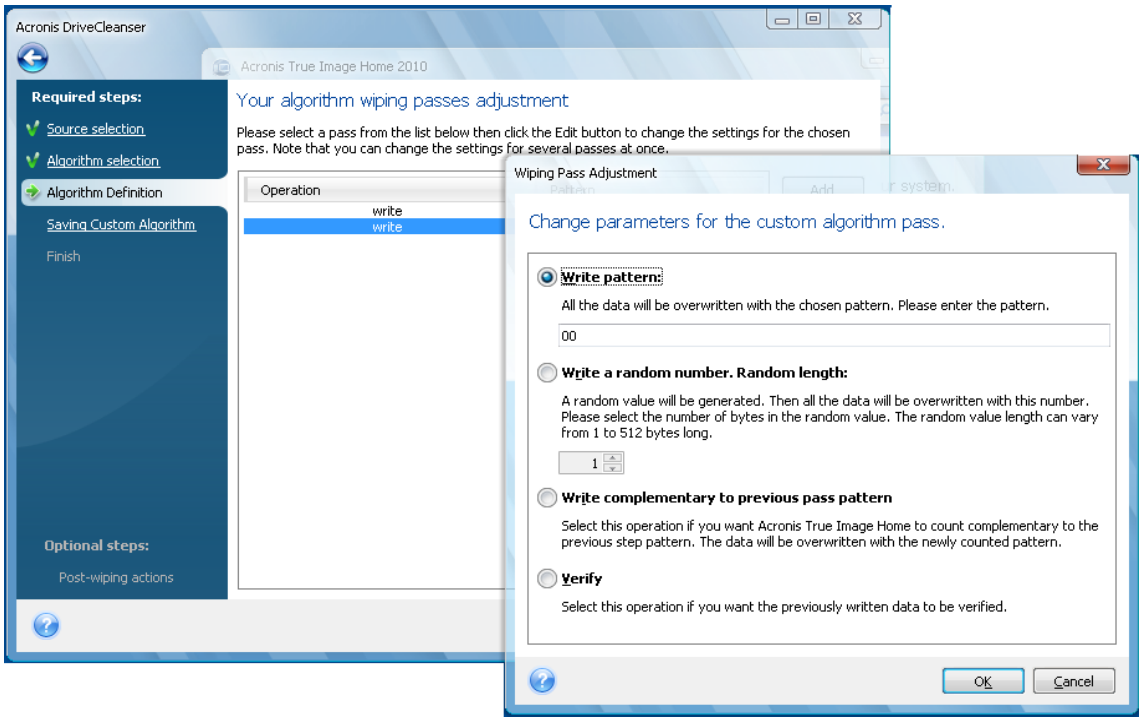
Creating a custom method of hard disk wiping is possible after choosing "**Custom…**" from the drop-down list in the **Algorithm selection** window. In this case some new required steps appear in the DriveCleanser wizard and you will be able to create a data destruction algorithm matching your security requirements.


Acronis DriveCleanser
Acronis True Image Home 2010
Required steps:
Source selection
Algorithm selection
Algorithm Definition
Saving Custom Algorithm
Finish
Optional steps:
Post-wiping actions
Your algorithm wiping passes adjustment
Please select a pass from the list below then click the Edit button to change the settings for the chosen pass. Note that you can change the settings for several passes at once.
Operation
write
write
Wiping Pass Adjustment
Change parameters for the custom algorithm pass.
Write pattern:
All the data will be overwritten with the chosen pattern. Please enter the pattern.
00
Write a random number. Random length:
A random value will be generated. Then all the data will be overwritten with this number. Please select the number of bytes in the random value. The random value length can vary from 1 to 512 bytes long.
1
Write complementary to previous pass pattern
Select this operation if you want Acronis True Image Home to count complementary to the previous step pattern. The data will be overwritten with the newly counted pattern.
Verify
Select this operation if you want the previously written data to be verified.
OK
Cancel

Having created a custom method, you can save the algorithm you created. This will be handy if you are going to use it again.

To save your algorithm, you need to give it a filename and show the path to the folder you want to store it in by selecting the folder from the tree shown in the left pane.

Each custom algorithm is stored in a separate file with its own name. If you try to write a new algorithm to a pre-existing file, the existing file's contents will be erased.

If you created and saved your algorithm for data destruction while working with Acronis DriveCleanser, you can use it later in the following way:

- In the **Algorithm selection** window, choose **Load from file…** from the drop-down list and select the file with custom data destruction algorithm parameters. By default, such files have a *.alg extension.

22.4. System Clean-up

The **System Clean-up** Wizard enables you to securely remove all traces of your PC actions stored by Windows.

It can carry out the following operations:

- Securely destroy data in the **Windows Recycle Bin**
- Remove **temporary files** from appropriate Windows folders
- Clean up **hard disk free space** of any traces of information previously stored on it

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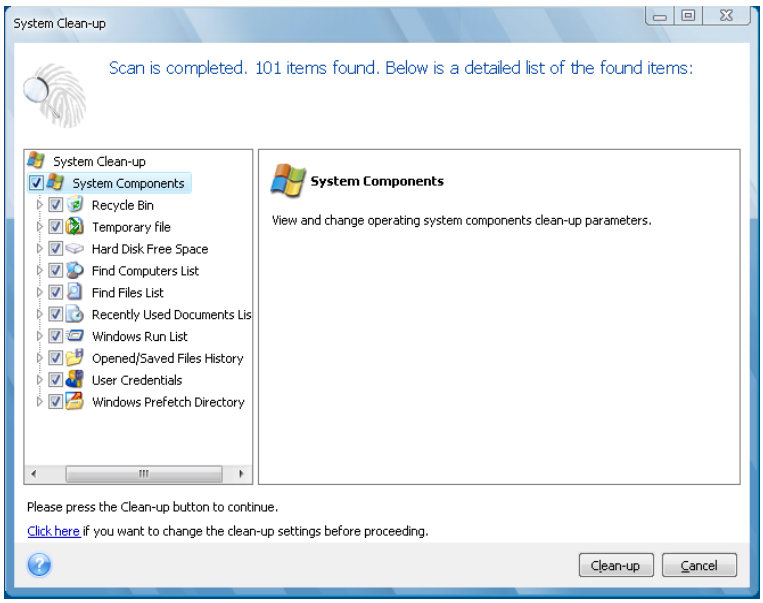
- Remove traces of **file and computer searches** on connected disks and computers in the local area network
- Clean the **recently used documents** list
- Clean the **Windows Run** list
- Clean the **opened/saved files** history
- Clean the list of network places to which the user has connected using **network credentials**
- Clean the **Windows prefetch directory**, where Windows stores information about programs you have executed and run recently

Windows Vista does not store information on file and computer searches. Furthermore, information on opened/saved files is stored differently in the registry, so the wizard shows this information in a different way.

*****

Please, be aware that Windows stores passwords until the session ends, so cleaning the list of network user credentials will not take effect until you end the current Windows session by logging out or by rebooting the computer.

After you run the **wizard** by selecting **Tools & Utilities** → **System Clean-up** in the main program menu, it will search for any traces of user actions stored by Windows. When the search is finished, its results will be available at the top of the **wizard window**.


System Clean-up
Scan is completed. 101 items found. Below is a detailed list of the found items:
System Clean-up
System Components
Recycle Bin
Temporary file
Hard Disk Free Space
Find Computers List
Find Files List
Recently Used Documents Lis
Windows Run List
Opened/Saved Files History
User Credentials
Windows Prefetch Directory
System Components
View and change operating system components clean-up parameters.
Please press the Clean-up button to continue.
Click here if you want to change the clean-up settings before proceeding.
Clean-up
Cancel

You can view the search results and manually select the items you wish to remove.

22.5. System Clean-up Wizard settings

If you want to change the default system clean-up settings, click the corresponding link in the first window of the **System Clean-up** Wizard.

To enable or disable any System Clean-up component, check or uncheck its **Enable** flag.

In the System Clean-up Wizard **Properties** window you can also set clean-up parameters for each system component. Some of these parameters apply to all components.

*You can restore the default system clean-up settings by clicking the **Restore Defaults** button in the **Properties** window.*

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22.5.1. "Data Destruction Method" setting

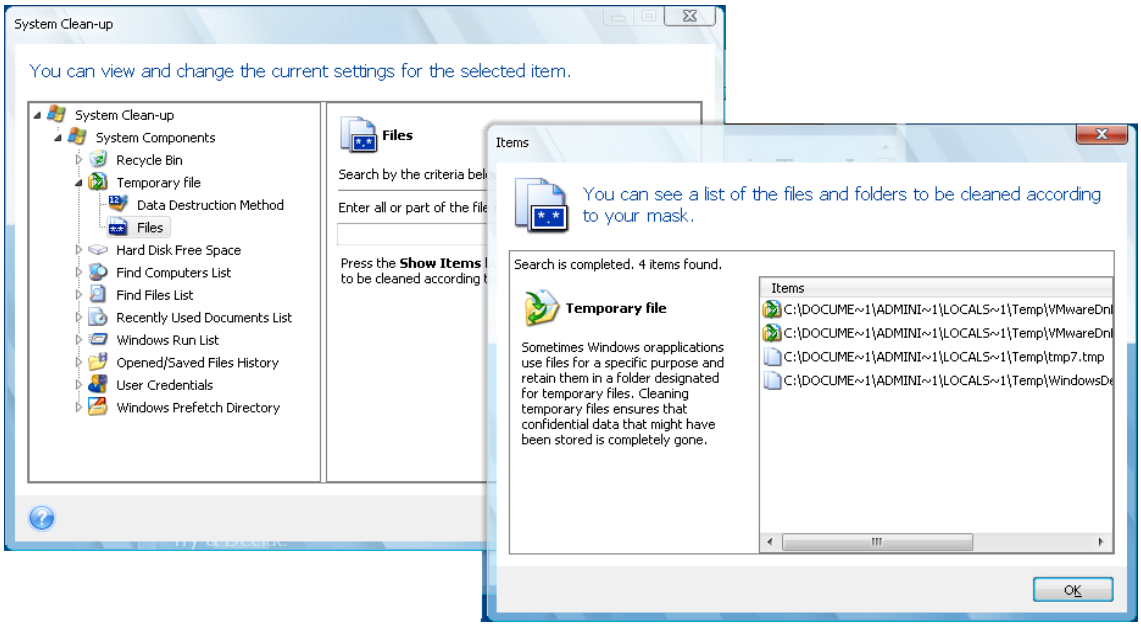
This setting defines the method of guaranteed data destruction to use for cleaning up a given component.

By default, all components that have this setting have it set to **Use common method**. You can change the common method by clicking the **Click to change this setting…** link and selecting a desired method from the drop-down list (see Hard Disk Wiping Methods (p. 196)).

If you need to set a custom method of data destruction for a component, choose **Use a custom method for this component** and then select the one you prefer from the drop-down list.

22.5.2. "Files" setting

The "Files" setting defines the names of files to clean with System Clean-up Wizard and can be used with a search string.


System Clean-up
You can view and change the current settings for the selected item.
System Clean-up
System Components
Recycle Bin
Temporary file
Data Destruction Method
Files
Hard Disk Free Space
Find Computers List
Find Files List
Recently Used Documents List
Windows Run List
Opened/Saved Files History
User Credentials
Windows Prefetch Directory
Files
Items
You can see a list of the files and folders to be cleaned according to your mask.
Search is completed. 4 items found.
Temporary file
Sometimes Windows orapplications use files for a specific purpose and retain them in a folder designated for temporary files. Cleaning temporary files ensures that confidential data that might have been stored is completely gone.
Items
C:\DOCUME~1\ADMINI~1\LOCALS~1\Temp\tmp7.tmp
OK

Under the Windows operating system, a search string can represent a full or partial filename. A search string can contain any alphanumeric symbols, including commas and Windows wildcard symbols, and can have values similar to the following:

- ***.*** – to clean all files with any file names and extensions
- ***.doc** – to clean all files with a specific extension – Microsoft document files in this case
- **read*.*** – to clean all files with any extensions, and names beginning with "read"

You can enter several different search strings separated by semicolons; for example:

.bak;.tmp;*.~~~ (without spaces between the search strings)

All files with names corresponding to at least one of the search strings will be cleaned.

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Upon entering the "Files" setting value, you can browse the files matching the search strings. To do this, click **Show Files**. You will see a window with the names of the found files. These files will be cleaned.

22.5.3. "Computers" setting

The "Computers" setting is used for cleaning up the registry search strings you have used for finding computers in the local network. These strings keep information on what has interested you in the network. These items should also be deleted to maintain confidentiality.

The "Computers" setting is similar to the "Files" setting. It is a string that can contain any number of full or partial computer names separated by semicolons. The deletion of computer search strings is based on a comparison with the "Computers" setting value according to Windows rules.

If you simply need to delete all local network computer search strings (suitable in most cases), just leave the default value of this setting.

As a result, all computer search strings will be deleted from the registry.

After entering the "Computers" setting value, you can browse the search strings found by the System Clean-up Wizard in the registry. To do so, click **Show Computers**. You will see the window with full and partial computer names searched for in the network. These items will be deleted.

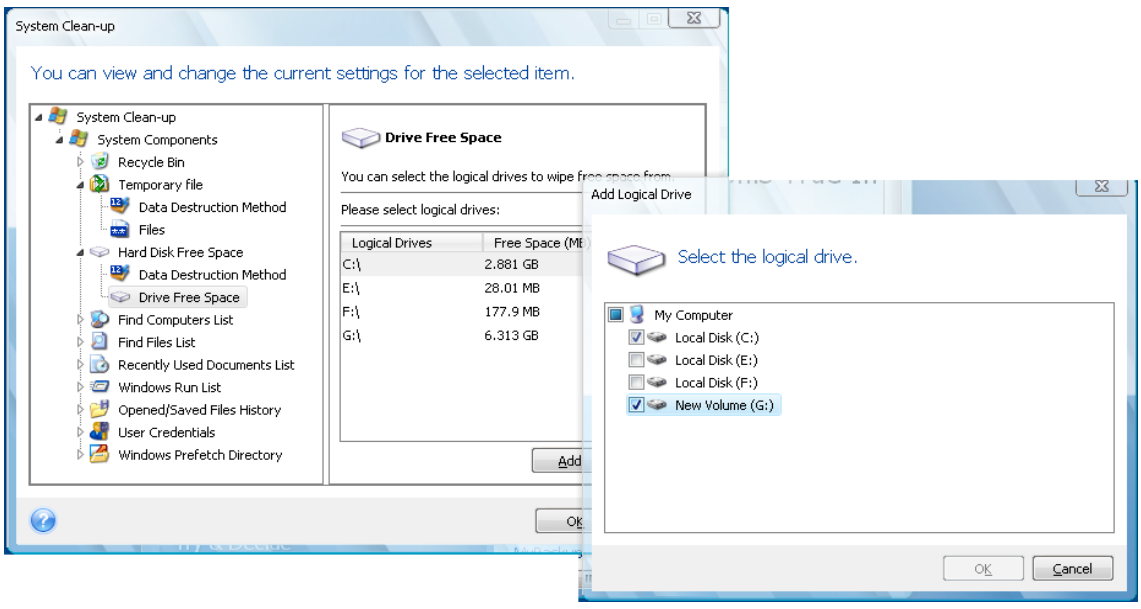
22.5.4. "Drive Free Space" setting

Here you can manually specify physical and/or logical drives to clean up free space on.

By default, the System Clean-up Wizard cleans up free space on all available drives.

If you want to change the settings of this parameter, you can use the **Remove** button to delete from the list the drives you don't need to clean free space on.

If you wish to add these drives to the list again, use the **Add** button.



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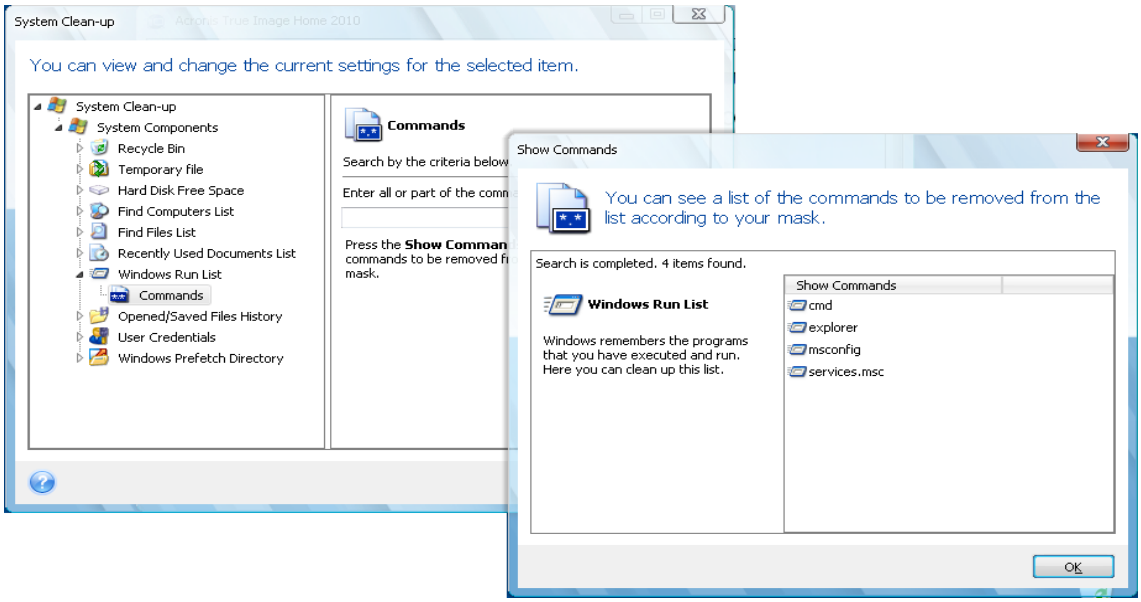
22.5.5. "Commands" setting

Here you can select the commands to remove during **Windows Run List** clean-up.

This template can contain any command names or their parts separated by semicolons, e.g.:

help; cmd; reg

This will result in removing commands with names corresponding to or containing any of the names or parts of names you entered.



22.5.6. "Network Places Filter" setting

Here you can enter (separated by semicolons) any hostnames or IP addresses of network places, servers, FTP servers, network shares, etc. to which you have made connection by supplying network credentials (a username and password). While entering hostnames and IP addresses you can use * and ? wildcards.

To see the list of network places for which the stored network user credentials will be wiped according to your filter, click **Show Network Places**.

22.6. Cleaning up separate system components

If you don't want to clean up all system components, you can clean components of your choice or an individual component separately.

In this case all global settings of the **System Clean-up Wizard** will be valid for individual components as well.

To clean up individual components, select them in the **System Components** section in the **System Clean-up** window and run the **System Clean-up Wizard**.

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23. Troubleshooting

23.1. General

The below sections may help you in troubleshooting issues encountered during installation and use of Acronis True Image Home. Among other information the Troubleshooting chapter includes links to Acronis Support Knowledge Base (KB) articles intended for helping to solve issues with Acronis products. If the appropriate Troubleshooting section does not provide a solution to your issue, you can click any link to go to the KB and then use the Search function – just enter the key words related to your problem. Since the Troubleshooting chapter covers just the most common issues, maybe the KB has recommendations on solving your specific problem. Furthermore, Acronis Support team continuously adds new articles to the KB. When you are not able to find the solution to your problem in the KB or the suggested solution does not help, feel free to contact Acronis Customer Central.

Acronis Support personnel may request you to provide the system report. To create the report, select Generate System Report in the Help menu (if you are able to start the program in Windows), then save the report and send it to Acronis Customer Central. If the issue prevents booting to Windows, try booting from Acronis rescue media and create the report in the standalone version of Acronis True Image Home, selecting the same item in the Help menu.

You can also start system report generation by simultaneously pressing the Ctrl+F7 keys both in Windows and the standalone version of Acronis True Image Home, even when a wizard is opened, a task is running or an error message is displayed.

Furthermore, now you can add to your rescue media Acronis System Report tool that allows you to generate the system report after booting from the rescue media when both Windows and Acronis True Image Home (full version) cannot start. In this case you will need a USB flash drive that will be used for saving the report.

Quite often the cause of an issue may be trivial, for example, a loose connection of an external hard drive. Before trying other solutions described in this chapter, it is advisable to check if the issue is caused by one of the following:

- loose connections to the external drive;
- poor quality connecting cable;

When using an external USB hard drive, try the following additional suggestions:

- if the drive is connected through a hub, connect it directly to a rear connector of your PC;
- to prevent conflict with other USB devices attached to your PC, try disconnecting all the USB devices (except the mouse and keyboard).

23.2. Installation issues

When you cannot install Acronis True Image Home, try the following solutions:

4. If you selected "Install for the current user only" during the installation, try to select "Install for all users that share this computer" and vice versa.
5. Launch the installation file in the following way: right-click on the file and select "Run as administrator".

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6. Log in to Vista's built-in administrator account and try to install the program:
   a. Click **Start** → **All Programs**, then find and open the "Accessories" folder.
   b. Right-click on the "Command Prompt" item and select "Run as administrator".
   c. Type the following command line in to the opened window:
   net user administrator /active:yes
   Take note that there is a space between "Administrator" and "/active:yes".
   d. Log off the current account and log in to the "Administrator" account.
   e. Try to install the application again.

If these solutions do not help, an AcronisSupport Knowledge base article may help you in troubleshooting and resolving the issue. Just follow the steps in the appropriate scheme. See Troubleshooting Installation Issues of Acronis Software

23.3. Backup and validation issues

1) When you get a problem with backup or validation, first of all make sure that you have the latest build of Acronis True Image Home. You can download it through your Acronis account. This is because Acronis are continuously working on improving our products. The latest build may contain bug fixes and provide enhanced hardware compatibility.

2) Errors encountered while backing up data or validating backup archives may be caused by hard disk errors and/or bad sectors, so check the source and destination disks if you encounter an issue when backing up or check the backup archive storage disk when validating a backup archive. To do this, use the Windows chkdsk utility as follows:

- Go to the Command Prompt (Start → Run → cmd)

- Enter the following command: "chkdsk DISK: /r" (where DISK is the partition letter you need to check, e.g. D:). Please note, that checking the C: drive may require you to reboot the PC.

3) The reason for errors may be defective RAM modules. To test the memory modules of your PC, please download one of the archives depending on what media type you are going to use:

- memtest archive for diskette

- memtest archive for USB Flash drive

- memtest archive for CD

Unpack the archive and create bootable media with the memory test. Instructions on how to do it can be found in README.txt in the archive.

4) Check whether this section contains a solution to your problem:

Scheduled task does not run

If your scheduled backup or validation task does not run, first of all carefully check all the settings made while creating the task. If the settings are correct, proceed as follows:

- Open **Control Panel** → **Administrative Tools** → **Services** and check whether Acronis Scheduler2 Service is Started and its Startup Type is set to Automatic. If not, right-click on the item, choose

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Properties and set the required Startup Type on the General tab, than start the service. Verify that the task can now be started. This recommendation relates to unscheduled tasks as well.

- If the issue persists, try the solutions provided in Acronis Support KB by clicking the following link: Acronis True Image Scheduled Tasks Do Not Run

The RPC server is unavailable

When a backup task is supposed to run according to its schedule or after starting a task manually, you get an error message: Error #1722 - "The RPC server is unavailable". In such case try the solution provided in Acronis Support KB by clicking the following link: RPC Server is Unavailable (Error Code: 1722)

Network backup issues

Instructions on how to troubleshoot issues with backing up to a network share in Windows can by found through the following link to an Acronis Support KB article: Troubleshooting Network Backup Issues in Windows

Backups to a mapped drive fail from time to time

Explanation of why saving an image to a mapped drive may sometimes fail and how to prevent this can be found through the following link to an Acronis Support KB article: Saving an Image to a Mapped Drive from an Acronis True Image Task Fails Sporadically

"Insert next volume" message when backing up to a USB flash drive

Acronis True Image Home treats your USB flash drive as removable media. If it is formatted in FAT32, the size of one file is limited to 4GB, so when your backup exceeds this size the program automatically splits it into 4GB volumes and waits for insertion of the next media for the next volume. Just click OK and the backup process will continue. Repeat this if the message is displayed again until your backup finishes. For more detailed information click Acronis True Image Asks to Insert Next Volume When Backing Up to USB Flash Drive

Issue with backing up an NTFS-compressed partition

Acronis True Image may fail to back up an NTFS-compressed partition due to some limitations on working with such partitions. If it is possible, decompress the partition before backing it up. For more detailed information click Acronis True Image Fails to Back Up a Compressed Partition

Acronis True Image Home states that a backup is corrupted

Instructions on how to troubleshoot and resolve issues with corrupt backups can be found through the following link to an Acronis Support KB article: Troubleshooting Issues with Corrupt Backups

Incremental/differential backup files have large sizes

You find out that incremental (or differential) backup files have sizes comparable with that of the full backup file. This can have several causes. For more information and possible solutions see the following Acronis Support KB article: Acronis True Image Creates Large Incremental or Differential Backup Archives.

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23.4. Recovery issues

System and/or data recovery after a disaster is the most important operation performed with Acronis True Image Home. Indeed what's the value of a backup program that cannot recover backed up data? If you have problems with recovery, try the following actions:

1) First of all make sure that you have the latest build of Acronis True Image Home. You can download it through your Acronis account.

2) If you recover the image from an external drive, try to copy that image to another storage and retry recovery as the issue may be related to the hardware.

3) If you have tried recovery in Windows, boot to the rescue media and try the recovery procedure once more.

4) If this is a data partition backup, you can try mounting it to recover at least some files and folders.

5) If the above suggestions have not helped to solve the problem, check whether this section gives a solution to your problem.

Network share with a backup not found by standalone Acronis True Image Home

There can be several reasons why you are not able to locate the desired network share when using a standalone version of Acronis True Image. See the Acronis Support KB article by clicking the following link: Standalone Version of Acronis True Image Cannot Find Network Share with an Image Archive

You cannot log on to a network share after booting to rescue media

How to solve the problem when a standalone version of Acronis True Image Home cannot log you on to the network where the image archive is, and keeps asking for the user name and password again and again. See the Acronis Support KB article by clicking the following link: Standalone Version of Acronis True Image Recovery Wizard Keeps Asking for User Name and Password When Trying to Restore an Image from a Network Share

New user profile created after recovering My mail backup of Microsoft Outlook

You can find the solution to this problem through the following link to an Acronis Support KB article: Restoring E-Mail Backup of Microsoft Outlook Creates a New Profile

You cannot get access to recovered files or folders

After recovering files/folders with Acronis True Image you get "Access denied" message when trying to access them. To solve the issue, see the Acronis Support KB article by clicking the following link: Access Denied to Files or Folders Restored with Acronis True Image

23.5. Bootability after recovery issues

If a system was bootable at the time of backup, you expect that it will boot after recovery. However, the information the operating system stores and uses for booting up may have become outdated at the time of recovery, especially if you change partition sizes, locations or destination drives. Acronis True Image Home automatically updates Windows loaders after recovery. Other loaders might also be fixed, but there are cases when you have to re-activate the loaders. Specifically when you recover Linux volume in a dual boot configuration, it is sometimes necessary to apply fixes or make booting

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changes so that Linux can boot and load correctly. Below is the summary of typical situations that require additional user actions when the recovered operating system becomes unbootable.

The machine BIOS is configured to boot from another hard disk drive (HDD).

Solution: Configure the BIOS to boot from the HDD where the operating system resides.

In some cases BIOS has two menus for setting the boot sequence: one for setting the boot devices priority and the other - for setting the HDD boot order.

A system partition was recovered to a disk that does not have MBR

When you configure recovery of a system partition to a disk that does not have MBR, the program prompts whether you want to recover the MBR along with the system partition. Opt for not recovering only if you do not want the system to be bootable.

Solution: Recover the partition once again along with the MBR of the corresponding disk.

Windows fails to boot with "NTLDR is missing" error message

Solution: Instructions on how to make Windows XP bootable if it reports "NTLDR is missing" after being recovered with Acronis True Image Home can by found in the following Acronis Support KB article: Windows Fails to Boot With "NTLDR is missing"

23.6. Other issues

Installation of Acronis True Image Home makes shared folders inaccessible

To learn why local shared folders on the machine cannot be accessed after installation of Acronis True Image Home on this computer, see the following Acronis Support KB article: Shared Folders Cannot be Accessed after Installation of Acronis True Image

Acronis True Image Home does not find any hard disks in Windows

If the Acronis product reports that it has not found any hard disks in Windows, the issue is probably in a third party software blocking access to the hard disks. For more details see the following Acronis Support KB article: Acronis Product Does Not Detect Hard Disks in Windows

Acronis True Image Home and Windows BitLocker

To back up and recover the system encrypted with BitLocker you need to create a sector-by-sector image after booting from Acronis rescue media. For more detailed information click Compatibility of Acronis True Image with Windows Vista BitLocker

Acronis True Image Home does not accept the correct backup archive password

If you provide the correct password and Acronis True Image Home displays "The password does not match" error message, please reinstall the program to resolve the issue. For more details see the following Acronis Support KB article: Acronis True Image Cannot Access a Backup Archive with the "Password does not match" Error

Disk clone operation in Windows aborted after reboot

Acronis product reboots in Windows Native Mode, but the cloning process finishes after a few seconds with no result. To handle the issue, see the following Acronis Support KB article: Acronis Product Fails to Clone After Reboot

You do not receive E-mail notifications

How to work around the situation when the set up E-mail notifications fail to be received can be found through the following link to an Acronis Support KB article: E-mail Notifications Fail in Acronis True Image

The standalone version of Acronis True Image Home does not detect your hard drive(s) or NIC card.

This is because the recovery environment does not have the appropriate drivers. The issue can be solved as follows:

- Create Acronis System Report and request Acronis Customer Central to provide you with an iso file of the rescue media that contains the required drivers.

- Create a Windows-based recovery environment that includes the required drivers. See: Working with Acronis True Image Plug-in for BartPE

Partition analysis is accompanied by multiple "Failed to read from sector…" error messages

To resolve the issue, try running chkdsk and updating Acronis drivers. For more details see the following Acronis Support KB article: article: Multiple "Failed to read from sector…" Error Messages During Partition Analysis or Backup

Wrong capacity of cloned hard drive

If the capacity of the cloned drive is the same as that of the original drive, when it should not be, then the issue is caused by Host Protected Area. For details see the following Acronis Support KB article: HPA Makes the Cloned Drive Display Wrong Capacity

The "Access denied" message appears when exploring a mounted image archive

Why you may get this message while trying to explore some folders in a mounted image and solutions to this issue can be found through the following link to the Acronis Support KB article: When Trying to Explore Certain Folders of a Mounted Image Archive, Access Denied Message Appears

You fail to mount an image spanned over several CD/DVDs

For an explanation of the issue with mounting a spanned image click Mounting an Image Spanned Over Several CD or DVD Discs Fails.

It takes a long time to start Acronis True Image Home

Try the following solutions to resolve this issue:

- make sure that you have the latest build of Acronis True Image Home
- install the latest Acronis drivers. If you do not have them, request them from Acronis Customer Central
- disable the "Distributed Link Tracking Client" service
- add Acronis executable files to trusted applications in your antivirus software

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- delete Vista restore points, if you do not need them

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24. Hard Disks and Boot Sequence

24.1. Arranging boot sequence in BIOS

BIOS has a built-in setup utility for initial computer configuration. To enter it, you have to press a certain key combination (**Del, F1, Ctrl+Alt+Esc, Ctrl+Esc**, or some other, depending on your BIOS) during the POST (power-on self test) sequence that starts immediately after you turn your computer on. Usually the message with the required key combination is displayed during the startup test. Pressing this combination takes you to the menu of the setup utility that is included in your BIOS.

The menu can differ in appearance, sets of items and their names, depending on the BIOS manufacturer. The most widely known BIOS makers for PC motherboards are Award/Phoenix and AMI. Moreover, while items in the standard setup menu are mostly the same for various BIOSes, items of the extended (or advanced) setup heavily depend on the computer and BIOS version.

Among other things, the BIOS menu allows you to adjust the **boot sequence**. **Boot sequence** management differs for various BIOS versions, e.g. for AMI BIOS, AWARDBIOS, and brand-name hardware manufacturers.

Computer BIOS allows booting operating systems not only from hard disks, but also from CD-ROMs, DVD-ROMs, and other devices. Changing the boot sequence may be required, for example, to make your rescue media (CD, DVD or USB stick) device the first booting device.

If there are several hard disks installed in your computer labeled as C:, D:, E:, and F:, you can reorder the boot sequence so that an operating system is booted from, for example, disk E:. In this case, you have to set the boot sequence to look like E:, CD-ROM:, A:, C:, D:.

*This does not mean that booting is done from the first device in this list; it only means that the **first attempt** to boot an operating system will be from this device. There may be no operating system on disk E:, or it may be inactive. In this case, BIOS queries the next device in the list.*

The BIOS numbers disks according to the order in which they are connected to IDE controllers (primary master, primary slave, secondary master, secondary slave); next go the SCSI hard disks.

This order is broken if you change the boot sequence in BIOS setup. If, for example, you specify that booting has to be done from hard disk E:, numbering starts with the hard disk that would be the third in usual circumstances (it is usually the secondary master for IDE hard drives).

After you have installed the hard disk in your computer and have configured it in BIOS, one can say that the PC (or the motherboard) "knows" about its existence and its main parameters. However, it is still not sufficient for an operating system to work with the hard disk. In addition, you have to create partitions on the new disk and format the partitions using Acronis True Image Home. See Adding a new hard disk.

24.2. Installing hard disk drives in computers

24.2.1. Installing an IDE hard disk drive, general scheme

To install a new IDE hard disk, you should do the following (**we will assume you have powered OFF your PC before you start!**):

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1. Configure the new hard disk as **slave** by properly installing jumpers on its controller board. Disk drives generally have a picture on the drive that shows the correct jumper settings.
2. Open your computer and insert the new hard disk into a 3.5'' or 5.25'' slot with special holders. Fasten down the disk with screws.
3. Plug the power cable into the hard disk (four-threaded: two black, yellow and red; there is only one way you can plug in this cable).
4. Plug the 40- or 80-thread flat data cable into the sockets on the hard disk and on the motherboard (plugging rules are described below). The disk drive will have a designation on the connector or next to it that identifies Pin 1. The cable will have one red wire on the end that is designated for Pin 1. Make sure that you place the cable in the connector correctly. Many cables are also "keyed" so that they can only go in one way.
5. Turn your computer on and enter BIOS setup by pressing the keys that are displayed on the screen while the computer is booting.
6. Configure the installed hard disk by setting the parameters **type**, **cylinder**, **heads**, **sectors** and **mode** (or **translation mode**; these parameters are written on the hard disk case) or by using the IDE autodetection BIOS utility to configure the disk automatically.
7. Set the boot sequence to A:, C:, CD-ROM or some other, depending on where your copy of Acronis True Image Home is located. If you have a boot diskette, set the diskette to be the first; if it is on a CD, make the boot sequence start with the CD-ROM.
8. Quit BIOS setup and save changes. Acronis True Image Home will automatically start after reboot.
9. Use Acronis True Image Home to configure hard disks by answering the wizard's questions.
10. After finishing the installation, turn off the computer, set the jumper on the disk to the **master** position if you want to make the disk bootable (or leave it in **slave** position if the disk is installed as additional data storage).

24.2.2. Motherboard sockets, IDE cable, power cable

There are two slots on the motherboard to which the hard disks can be connected: **primary IDE** and **secondary IDE**.

Hard disks with an IDE (Integrated Drive Electronics) interface are connected to the motherboard via a 40- or 80-thread flat marked cable: one of the threads of the cable is red.

Two IDE hard disks can be connected to each of the sockets, i.e. there can be up to four hard disks of this type installed in the PC (there are three plugs on each IDE cable: two for hard disks and one for the motherboard socket).

As noted, IDE cable plugs are usually designed so that there is only one way to connect them to the sockets. Usually, one of the pinholes is filled on the cable plug, and one of the pins facing the filled hole is removed from the motherboard socket, so it becomes impossible to plug the cable in the wrong way.

In other cases, there is a jut on the plug on the cable, and an indentation in the sockets of the hard disk and the motherboard. This also ensures that there is only one way to connect the hard disk and the motherboard.

In the past, this design of plug did not exist, so there was an empirical rule: **the IDE cable is connected to the hard disk socket so that the marked thread is the closest to the power cable**, i.e.

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the marked thread connected to pin #1 of the socket. A similar rule was used for connecting cables with the motherboard.

Incorrect connection of the cable with either the hard disk or the motherboard does not necessarily damage the electronics of the disk or the motherboard. The hard disk is simply not detected or initialized by BIOS.

There are some models of hard disks, especially the older ones, for which incorrect connection damaged the electronics of the drive.

*****

We will not describe all the types of hard disks. Currently the most widely used are those with IDE or SCSI interfaces. Unlike IDE hard disks, there can be from six to 14 SCSI hard disks installed in your PC. However, you need a special SCSI controller (called a host adapter) to connect them. SCSI hard disks are not usually used in personal computers (workstations), but are found mostly in servers.

Aside from an IDE cable, a four-thread power cable must be connected to the hard disks. There is only one way to plug in this cable.

24.2.3. Configuring hard disk drives, jumpers

A hard disk drive can be configured in a computer as **master** or as **slave**. The configuring is done using special connectors (called jumpers) on the hard disk drive.

The jumpers are either located on the electronic board of the hard disk or a special socket that provides for the connection of the hard disk and the motherboard.

There is usually a sticker on the drive that explains the markings. Typical markings are **DS**, **SP**, **CS** and **PK**.

Each jumper position corresponds to one hard disk(s) installation mode:

- **DS – master/factory default**
- **SP – slave (or no jumper required)**
- **CS – cable select for master/slave**: the purpose of the hard disk is determined by its physical position with respect to the motherboard
- **PK – jumper parking position**: the position where one can put the jumper if it is not necessary in the existing configuration

The hard disk with the jumper in **master** position is treated by the basic input/output system (BIOS) as bootable.

The jumpers on hard disks that are connected to the same cable can be in the **cable select for master/slave** position. In this case, BIOS will deem as "master", the disk that is connected to the IDE cable, which is closer to the motherboard than the other one.

Unfortunately, hard disk markings were never standardized. You might well find that markings on your hard disk differ from the ones described above. Moreover, for old types of hard disks, their purpose could be defined by two jumpers instead of one. You should study the markings carefully before installing your hard disk in the computer.

It is not enough to physically connect the hard disk to the motherboard and set the jumpers properly for the hard disk to function — hard disks have to be properly configured with the motherboard BIOS.

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24.2.4. Installing a SATA hard drive

Most recently manufactured PCs use the SATA interface for hard drives. In general, installing a SATA hard drive is easier than an IDE drive, as it is not necessary to configure master-slave jumpers. SATA drives use a thin interface cable with seven-pin keyed connectors. This improves airflow through the PC case. Power is supplied to SATA drives through 15-pin connectors. Some SATA drives also support legacy four-pin power connectors (Molex) — you can use a Molex or SATA connector but do not use both at the same time, because this could damage the hard drive. You'll also need a free power lead fitted with a SATA power connector. Most systems that come with SATA ports have at least one SATA power connector. If this is not the case, you will need a Molex-to-SATA adapter. In case your system has the SATA power connector but it is already occupied, use a Y-adapter that splits a lead in two.

24.2.5. Steps for installing a new internal SATA drive

1. Find an unused SATA port using the documentation provided with your PC. If you are going to connect your new SATA drive to a SATA controller card, install the card. If you are going to connect the SATA drive to the motherboard, enable applicable motherboard jumpers, if any. Most hard drive kits include a SATA interface cable and mounting screws. Attach one end of the SATA interface cable to a SATA port on the motherboard or interface card, and the other to the drive.
2. Then plug the power-supply lead or use a Molex-to-SATA adapter.
3. Prepare your drive. If you're installing a SATA 300 hard drive, check your PC's (or SATA host adapter's) documentation to make sure it supports SATA 300 drives. If it doesn't, you might need to change a jumper setting on the drive (see the drive's manual for instructions). If you have a SATA 150 hard drive, you don't need to change any settings.
4. Turn on the PC and look for the new drive in the boot-up messages. If you don't see it, enter the PC's CMOS setup program and search the BIOS configuration menu for an option that will let you enable SATA for the ports you are using (or maybe you will just need to enable SATA). See your motherboard documentation for instructions specific to your BIOS.
5. If the operating system does not recognize the SATA drive, you need the appropriate drivers for your SATA controller. If the drive is recognized, go to step 8.

- Usually, it is best to obtain the latest driver version from the motherboard or SATA controller manufacturer's Web site.
- If you download a copy of the SATA controller drivers, place the driver files to a known location on your hard drive.

6. Boot from the old hard drive.

- The operating system should detect the SATA controller and install the appropriate software. You might need to provide the path to the driver files.

7. Ensure that the SATA controller and the connected SATA hard drive are correctly detected by the operating system. To do this, go to the Device Manager.

- SATA controllers usually appear under the SCSI and RAID controllers section of Device Manager, while hard drives are listed under the Disk drives section.
- The SATA controller and SATA hard drive must not be displayed in the Device Manager with a yellow exclamation mark or any other error indication.

8. After you have installed the hard disk in your computer and have configured it in BIOS, one can say that the PC "knows" about its existence and its main parameters. However, it is still not enough for the operating system to work with the hard disk. In addition, you have to create

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partitions on the new disk and format the partitions using Acronis True Image Home. See Adding a new hard disk (p. 172). Then configure your BIOS to boot from the SATA controller and boot from the SATA hard drive to ensure it works.

24.3. Hard Disk Wiping methods

Information removed from a hard disk drive by non-secure means (for example, by simple Windows delete) can easily be recovered. Utilizing specialized equipment, it is possible to recover even repeatedly overwritten information. Therefore, guaranteed data wiping is more important now than ever before.

The **guaranteed wiping of information** from magnetic media (e.g. a hard disk drive) means it is impossible to recover data by even a qualified specialist with the help of all known tools and recovery methods.

This problem can be explained in the following way: Data is stored on a hard disk as a binary sequence of 1 and 0 (ones and zeros), represented by differently magnetized parts of a disk.

Generally speaking, a 1 written to a hard disk is read as 1 by its controller, and 0 is read as 0. However, if you write 1 over 0, the result is conditionally 0.95 and vice versa – if 1 is written over 1 the result is 1.05. These differences are irrelevant for the controller. However, using special equipment, one can easily read the «underlying» sequence of 1's and 0's.

It only requires specialized software and inexpensive hardware to read data "deleted" this way by analyzing magnetization of hard disk sectors, residual magnetization of track sides and/or by using current magnetic microscopes.

Writing to magnetic media leads to subtle effects summarized as follows: every track of a disk stores **an image of every record** ever written to it, but the effect of such records (magnetic layer) becomes more subtle as time passes.

24.3.1. Functioning principles of Information wiping methods

Physically, the complete wiping of information from a hard disk involves the switching of every elementary magnetic area of the recording material as many times as possible by writing specially selected sequences of logical 1's and 0's (also known as samples).

Using logical data encoding methods in current hard disks, you can select **samples** of symbol (or elementary data bit) sequences to be written to sectors in order to **repeatedly and effectively wipe confidential information.**

Methods offered by national standards provide (single or triple) recording of random symbols to disk sectors that are **straightforward and arbitrary decisions, in general**, but still acceptable in simple situations. The most effective information-wiping method is based on deep analysis of subtle features of recording data to all types of hard disks. This knowledge speaks of the necessity of complex multipass methods to **guarantee** information wiping.

The detailed theory of guaranteed information wiping is described in an article by Peter Gutmann. Please see:

Secure Deletion of Data from Magnetic and Solid-State Memory.

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24.3.2. Information wiping methods used by Acronis

The table below briefly describes information wiping methods used by Acronis. Each description features the number of hard disk sector passes along with the number(s) written to each sector byte.

The description of built-in information wiping methods

No.	Algorithm (writing method)	Passes	Record
1.	United States Department of Defense 5220.22-M	4	1st pass – randomly selected symbols to each byte of each sector, 2 – complementary to written during the 1st pass; 3 – random symbols again; 4 – writing verification.
2.	United States: NAVSO P-5239-26 (RLL)	4	1st pass – 0x01 to all sectors, 2 – 0x27FFFFFF, 3 – random symbol sequences, 4 – verification.
3.	United States: NAVSO P-5239-26 (MFM)	4	1st pass – 0x01 to all sectors, 2 – 0x7FFFFFFF, 3 – random symbol sequences, 4 – verification.
4.	German: VSITR	7	1st – 6th – alternate sequences of: 0x00 and 0xFF; 7th – 0xAA; i.e. 0x00, 0xFF, 0x00, 0xFF, 0x00, 0xFF, 0xAA.
5.	Russian: GOST P50739-95	1	Logical zeros (0x00 numbers) to each byte of each sector for 6th to 4th security level systems. Randomly selected symbols (numbers) to each byte of each sector for 3rd to 1st security level systems.
6.	Peter Gutmann's method	35	Peter Gutmann's method is very sophisticated. It's based on his theory of hard disk information wiping (see Secure Deletion of Data from Magnetic and Solid-State Memory).
7.	Bruce Schneier's method	7	Bruce Schneier offers a seven-pass overwriting method in his Applied Cryptography book. 1st pass – 0xFF, 2nd pass – 0x00, and then five times with a cryptographically secure pseudo-random sequence.
8.	Fast	1	Logical zeros (0x00 numbers) to all sectors to wipe.

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25. Startup Parameters

Additional parameters that can be applied prior to booting Linux kernel.

25.1. Description

Additional parameters that can be applied prior to booting Linux kernel

Description

The following parameters can be used to load Linux kernel in a special mode:

- **acpi=off**

Disables ACPI and may help with a particular hardware configuration.

- **noapic**

Disables APIC (Advanced Programmable Interrupt Controller) and may help with a particular hardware configuration.

- **nousb**

Disables loading of USB modules.

- **nousb2**

Disables USB 2.0 support. USB 1.1 devices still work with this option. This option allows using some USB drives in USB 1.1 mode, if they do not work in USB 2.0 mode.

- **quiet**

This parameter is enabled by default and the startup messages are not displayed. Deleting it will result in the startup messages being displayed as the Linux kernel is loaded and the command shell being offered prior to running the Acronis program.

- **nodma**

Disables DMA for all IDE disk drives. Prevents kernel from freezing on some hardware.

- **nofw**

Disables FireWire (IEEE1394) support.

- **nopcmcia**

Disables PCMCIA hardware detection.

- **nomouse**

Disables mouse support.

- **[module name]=off**

Disables the module (e.g. **sata_sis=off**).

- **pci=bios**

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Forces to use PCI BIOS, and not to access the hardware device directly. For instance, this parameter may be used if the machine has a non-standard PCI host bridge.

- **pci=nobios**

Disallows use of PCI BIOS; only direct hardware access methods are allowed. For instance, this parameter may be used if you experience crashes upon boot-up, probably caused by the BIOS.

- **pci=biosirq**

Uses PCI BIOS calls to get the interrupt routing table. These calls are known to be buggy on several machines and they hang the machine when used, but on other computers it is the only way to get the interrupt routing table. Try this option, if the kernel is unable to allocate IRQs or discover secondary PCI buses on your motherboard.

- **vga=ask**

Gets the list of the video modes available for your video card and allows selecting a video mode most suitable for the video card and monitor. Try this option, if the automatically selected video mode is unsuitable for your hardware.

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26. Index

A

Acronis Boot Sequence Manager • 137

Acronis DriveCleanser • 176

Acronis DriveCleanser, File Shredder, and System Clean-up • 24

Acronis Nonstop Backup • 25, 47

Acronis One-click Backup • 33

Acronis Secure Zone™ • 21, 71, 121

Acronis Startup Recovery Manager • 17, 23

Acronis True Image Home basic concepts • 10, 20, 42

Acronis True Image Home installation and startup • 16

Acronis Universal Restore • 25, 103

Adding a new hard disk • 172, 196

Adding the Acronis Plug-in to WinPE 1.x • 131

Adding the Acronis Plug-in to WinPE 2.x or 3.0 • 131, 132

Additional backup features • 63

Additional recovery information • 95

Archive protection • 78

Archive selection • 95

Archive splitting • 82

Archive to various places • 65

Archive validation • 83

Arranging boot sequence in BIOS • 12, 29, 42, 85, 87, 89, 103, 136, 192

Assigning a letter to the recovered partition • 100

B

Backing up a data partition or disk • 43

Backing up a system partition • 40

Backing up an entire system disk • 42

Backing up files/folders • 44

Backing up to a network share • 45

Backing up to Acronis Online Storage • 55

Backup and validation issues • 186

Backup file naming conventions • 20

Backup method • 72

Backup options • 77

Backup priority • 79

Backup reserve copy • 83

Backup Wizard – detailed information • 68

Bootability after recovery issues • 188

Booting from a tib image of your Windows 7 system partition • 136

Booting from system image tib files • 25

C

Changing password for Acronis Secure Zone • 124

Changing the recovered partition size and location • 99

Changing the recovered partition type • 99

Cleaning up separate system components • 184

Cloning summary • 171

Cloning with manual partitioning • 169

Compression level • 78

Configuring hard disk drives, jumpers • 194

Connection attempts • 60

Consolidating backups • 36, 159, 160

Converting tib images into vhd virtual disks and vice versa • 134

Converting to Acronis backup • 135, 160

Converting to Windows backup • 134, 160

Creating a custom data category for backups • 56, 69, 84

Creating a custom rescue CD • 31

Creating Acronis Secure Zone • 121

Creating an Online backup account • 54

Creating backup archives • 39

Creating BartPE disc with Acronis True Image Home • 128

Creating bootable media • 16, 126

Creating custom algorithms of data destruction • 177, 179

Creating Linux-based rescue media • 126

Creating new partitions • 172

Creating scheduled tasks • 111

Creating WinPE-based rescue media • 130

Customer technical support • 15

D

Data recovery with Acronis True Image Home • 85

Deciding what data to back up • 39

Deleting Acronis Secure Zone • 125

Description • 198

Detailed information on recovery operations involving dynamic/GPT disks and volumes • 102

Disk add summary • 173

E

E-mail notification • 155

Enabling and setting up Acronis Nonstop Backup • 47

Error handling • 80

Examples of backup scheduling scenarios • 44, 46, 117

Executing recovery • 100

Executing transfers • 166

Exploring archives and mounting images • 16, 19, 139, 159

Extracting Acronis True Image Home • 16

F

File recovery options • 79, 101

File-level security settings • 79, 101, 128

Fine-tuning your backups • 37, 75, 77

Free space threshold • 81

Full + incremental/differential backups with automatic rotation • 112, 119

Full backups to Acronis Secure Zone with automatic deletion • 118

Full backups with automatic deletion on quota violation • 117

Full backups with automatic deletion when backup storage is filled • 118

Full, incremental and differential backups • 19, 43, 44, 46, 72

Functioning principles of Information wiping methods • 196

G

General • 185

General information • 165

General information and proprietary Acronis technologies • 19

General principles of Acronis Universal Restore • 26

Getting to know Acronis True Image Home • 32

H

Hard Disk Wiping methods • 176, 177, 182, 196

Hard Disks and Boot Sequence • 165, 192

HDD writing speed • 81

How it works • 23

How to prepare for disaster as best as you can • 27

How to use • 23

I

Importing scheduled tasks when upgrading • 116

Information wiping methods used by Acronis • 197

Installation issues • 185

Installing a SATA hard drive • 195

Installing Acronis True Image Home • 16

Installing an IDE hard disk drive, general scheme • 192

Installing hard disk drives in computers • 192

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Introduction • 9

L

Limitations in using Acronis Universal Restore • 26

Local storage settings • 81

M

Main screens • 35

Making reserve copies of your backups • 63

Managing Acronis Nonstop Backup storage • 53

Managing Acronis Secure Zone • 22, 121

Managing backup archives • 159

Managing Online Storage • 59

Managing scheduled tasks • 116

Minimum system requirements • 13

Motherboard sockets, IDE cable, power cable • 193

Mounting an image • 91, 139

Moving backup archives • 159, 163

N

Network connection speed • 81

New in Acronis True Image Home 2010 • 12

O

Online backup • 54

Operation results notification • 37, 154

Options screen • 37

Other issues • 189

Other operations • 153

Overwrite file options • 101

P

Partitioned destination disk • 168

Pre/post commands • 78, 102

Preparing for disaster recovery • 27

Preparing for your first backup • 39

Program workspace • 32

Providing a comment • 76

Proxy settings • 62

Purpose of Acronis Universal Restore • 25

R

Recommendations on selecting data for storing online • 55

Recovering a data partition or disk • 50, 90

Recovering a disk backup to a different capacity hard disk • 86

Recovering a disk with a hidden partition • 87, 88

Recovering a disk without a hidden partition • 87

Recovering data from Online Storage • 57

Recovering files and folders • 91, 95

Recovering files and folders from file archives • 91

Recovering files and folders from image archives • 51, 91, 92

Recovering files protected with Acronis Nonstop Backup • 50, 51

Recovering partitions protected with Acronis Nonstop Backup • 50

Recovering your system partition • 50, 85, 86

Recovery issues • 188

Recovery method selection • 96

Recovery priority • 102

Recovery using vhd files created by Windows Backup • 136

Recovery Wizard - detailed information • 95, 159

Removable media settings • 80

Removing Acronis True Image Home • 17

Removing backup archives • 159, 163

Resizing Acronis Secure Zone • 124

Running Acronis True Image Home • 17

S

Scheduling • 72

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Scheduling tasks • 22, 57, 72, 111
Searching • 36, 143
Searching backup archives and their content • 143
Security • 165
Security and Privacy Tools • 175
Selecting a disk/partition to recover • 97
Selecting a hard disk • 172
Selecting a target disk/partition • 98
Selecting archive location • 70
Selecting Clone mode • 166
Selecting destination disk • 167
Selecting partition transfer method • 168
Selecting source disk • 167
Selecting the backup options • 75
Selecting what data to back up • 56, 68
Selecting what to exclude • 74
Setting automatic consolidation • 44, 46, 75
Setting default recovery options • 37, 91, 100, 101
Setting online backup options • 60
Setting recovery options • 100
Setting up daily execution • 114
Setting up monthly execution • 115
Setting up once only execution • 112
Setting up periodical execution • 113
Setting up upon event execution • 112
Setting up weekly execution • 115
Some typical backup scenarios • 40
Starting the Recovery Wizard • 95
Startup Parameters • 127, 198
Steps for installing a new internal SATA drive • 195
Storage cleanup • 61
Storage connection speed • 61
Support for Zip format • 24, 70
Supported file systems • 14
Supported operating systems • 13
Supported storage media • 14, 39, 71, 91, 93, 95
System Clean-up • 180
System Clean-up Wizard settings • 181
System requirements and supported media • 13

T

Testing bootable rescue media • 27, 28, 42, 85
The backup process • 77
The difference between file archives and disk/partition images • 19, 40
Transferring the system to a new disk • 165
Troubleshooting • 185
Try&Decide • 24, 105
Try&Decide options and notifications • 108
Try&Decide usage examples • 109

U

Unmounting an image • 142, 159
Upgrading Acronis True Image Home • 17
Using Acronis Nonstop Backup • 49
Using Acronis Universal Restore • 103
Using File Shredder • 175
Using Google Desktop with Acronis True Image Home • 145
Using Try&Decide • 108
Using Windows Search with Acronis True Image Home • 148

V

Validating backup archives • 153, 159
Viewing disk and partition information • 23
Viewing Tasks and Logs • 36, 156

W

What is Acronis Nonstop Backup • 47
What is Acronis® True Image Home? • 9
What is Try&Decide™? • 24

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What to exclude • 74, 77

Windows Search and Google Desktop integration • 144

WinPopup notification • 156

Working with vhd files • 134

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